Overall Information

Table1- Overall Information

Vehicle plate number	85476
CPK data logger number	LN: 001508, DN: 2003, Sim +989218469624
Bus line	Number 10 (south to north Bus line)
Bus Terminals	Azadi square - Daneshgah square
Total path distance	10.7 km
DPF producer company	HJS_04 (Passive system with FBC)
Installation date	23/Feb/2015
Report period	01/Jun/2016 – 15/Jun/2016 (fifteen days)
K value - DPF upstream	1.90 [1/m]
K value – DPF downstream	0.02 [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	DPF was cleaned on 22nd Jul for the first time and on 15th Dec for the second time after 44355 km mileage from installation date.
Dosing status	Dosing value has been kept constant from installation date until now.

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Table 3- Fuel and Additive Consumption Information

Bus mileage (from DPF installation date)	69575 km
Bus mileage over the period	2814 km
Working days over the period	14 days
Stop days	1 day
Data logger working days	14 days
Working hours over the period	176 hours 58 minutes
Average working hours per day (including stop days)	11 hours 48 minutes
Bus average speed	15.9 km/hr
idle speed time to all working time ration	33.73 %
Total Bus fuel consumption over the period	1745 lit
Fuel consumption per hour	9.85 lit/hr
Average fuel consumption	0.62 lit/km
Total Bus additive consumption over the period	0.835 lit
Average additive consumption	297 cc/km
Additive consumption to fuel ration	479 cc/1000lit

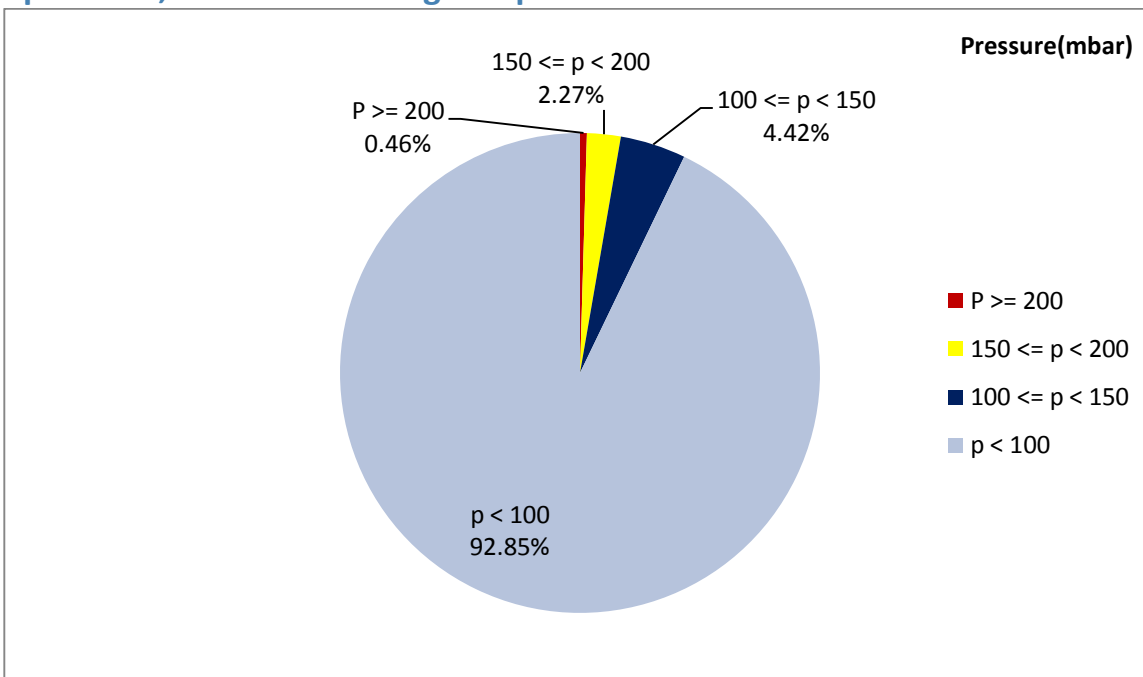## Temperature, Pressure and Engine Speed Overview
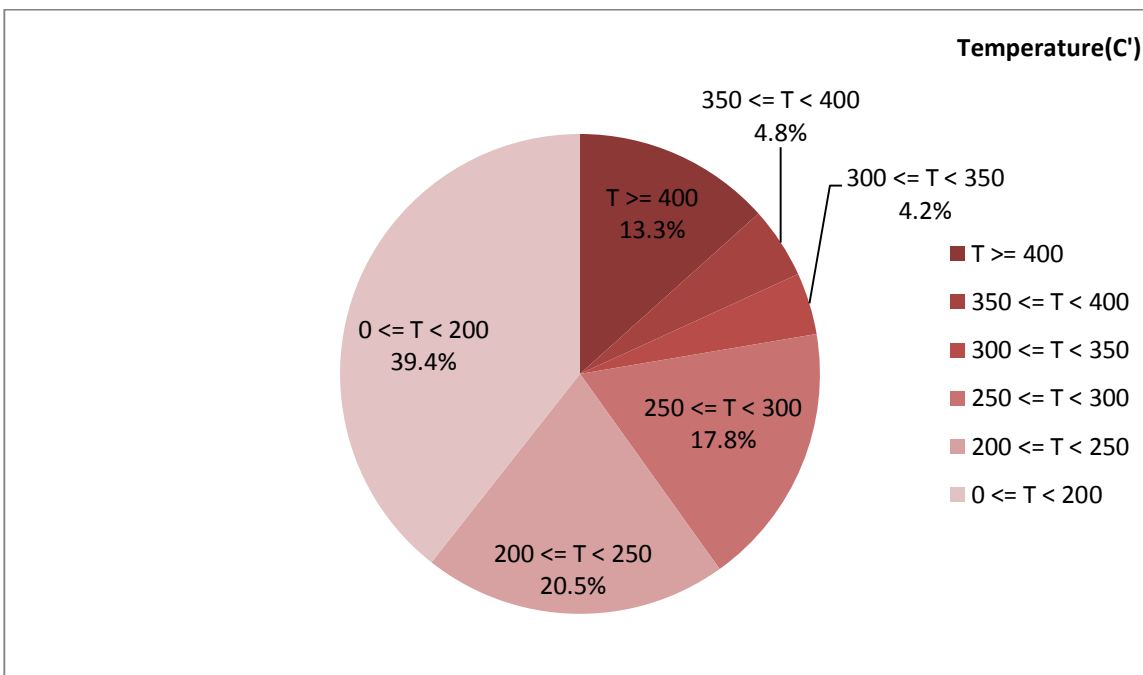

Figure 1- Pressure distribution over the working hours
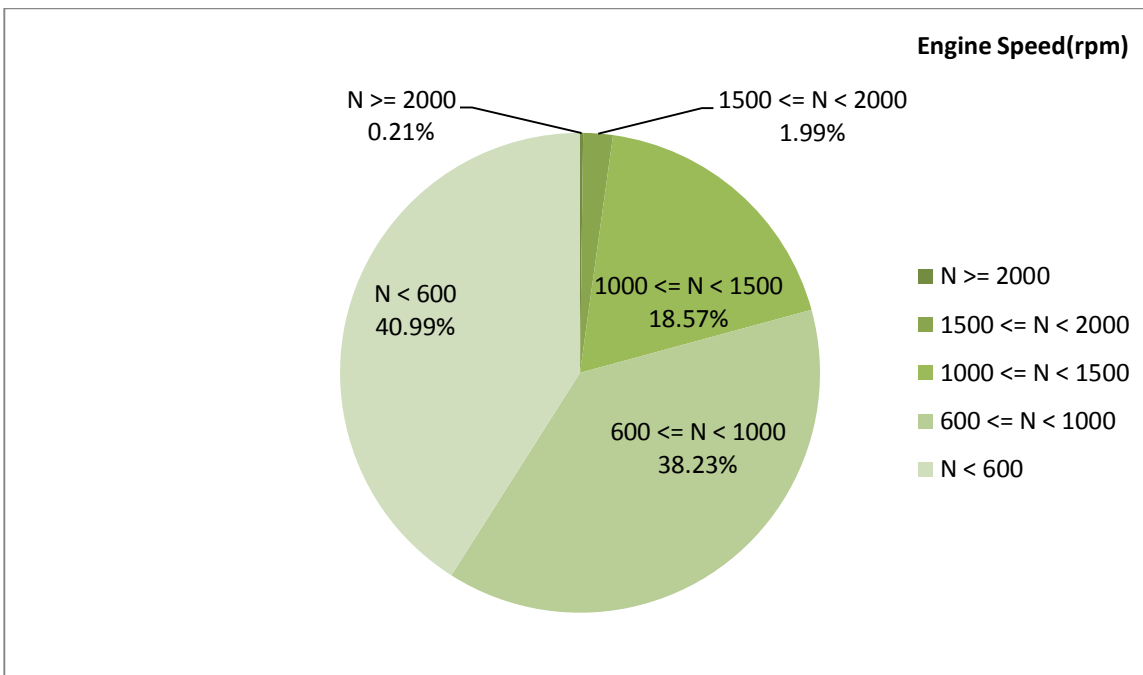

Figure 2-Temperature distribution over the working hours

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Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
248.31	31.9	734

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
258.09	40.33	827

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
586-50	279-0	2304-256

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Detailed Pressure Analysis
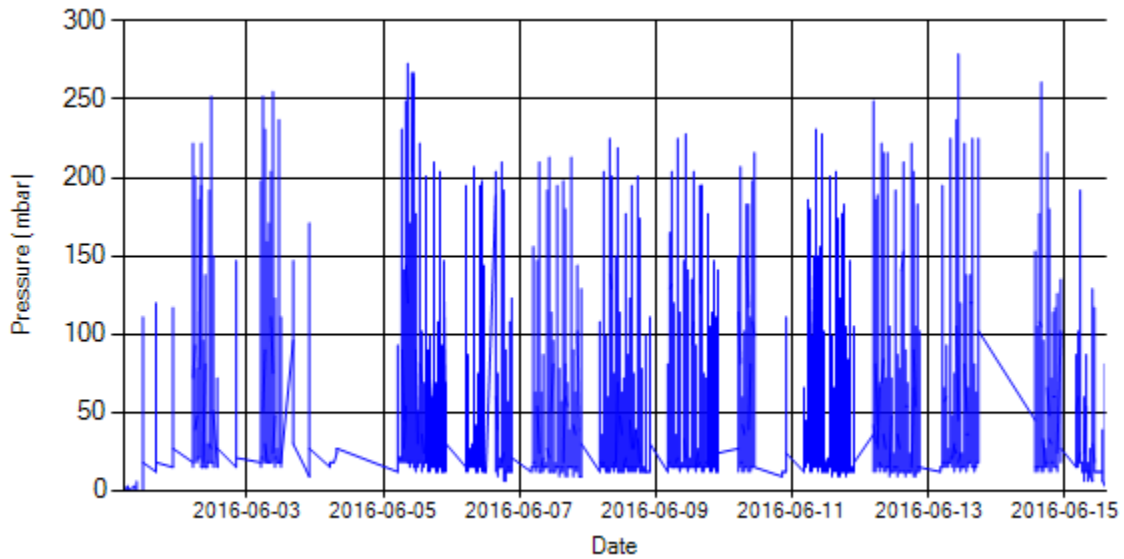
Figure 4- Pressure distribution over the period
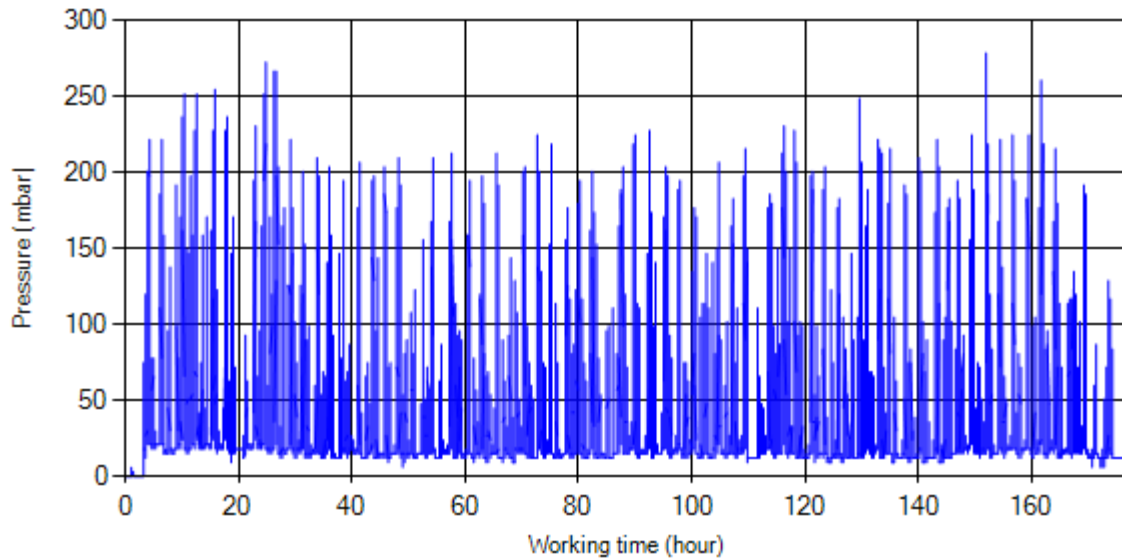
Figure 5- Pressure vs. working hours

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.
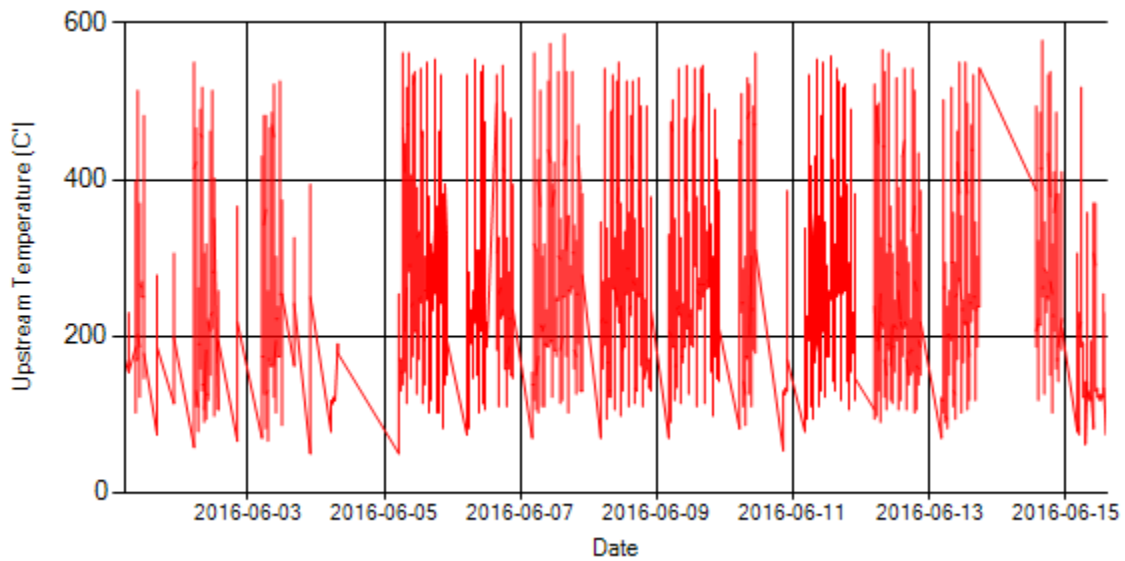
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Detailed Temperature Analysis
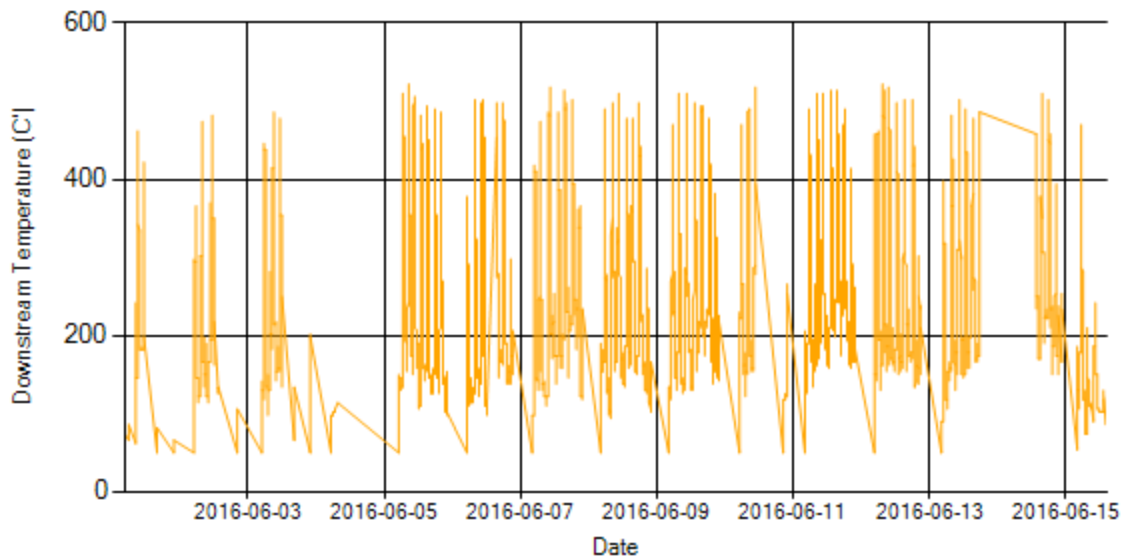

Figure 6- Temperature distribution over the period
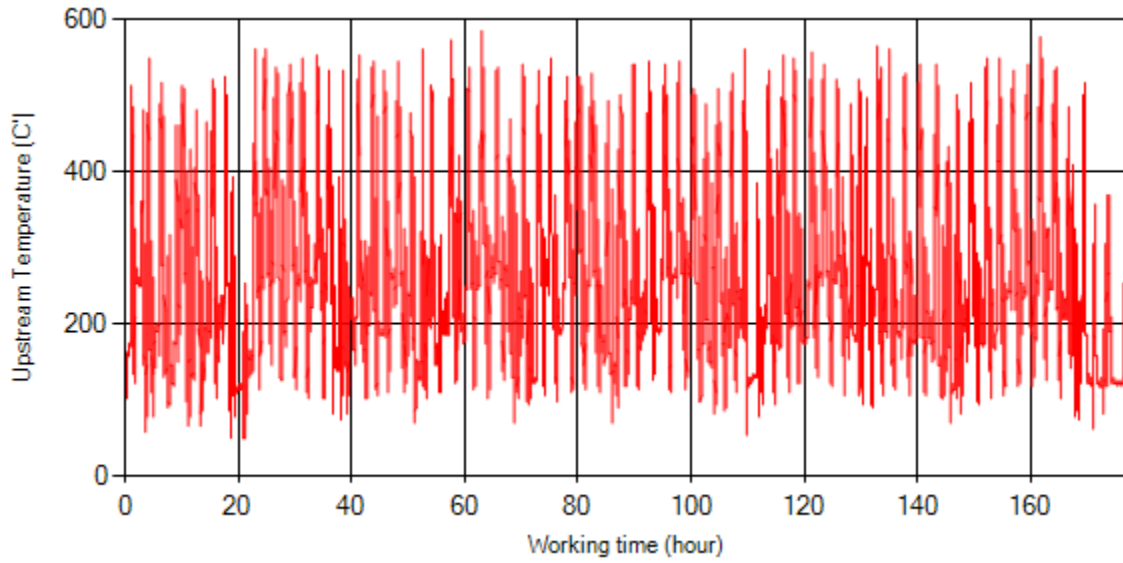

Figure 7- Temperature distribution over the period

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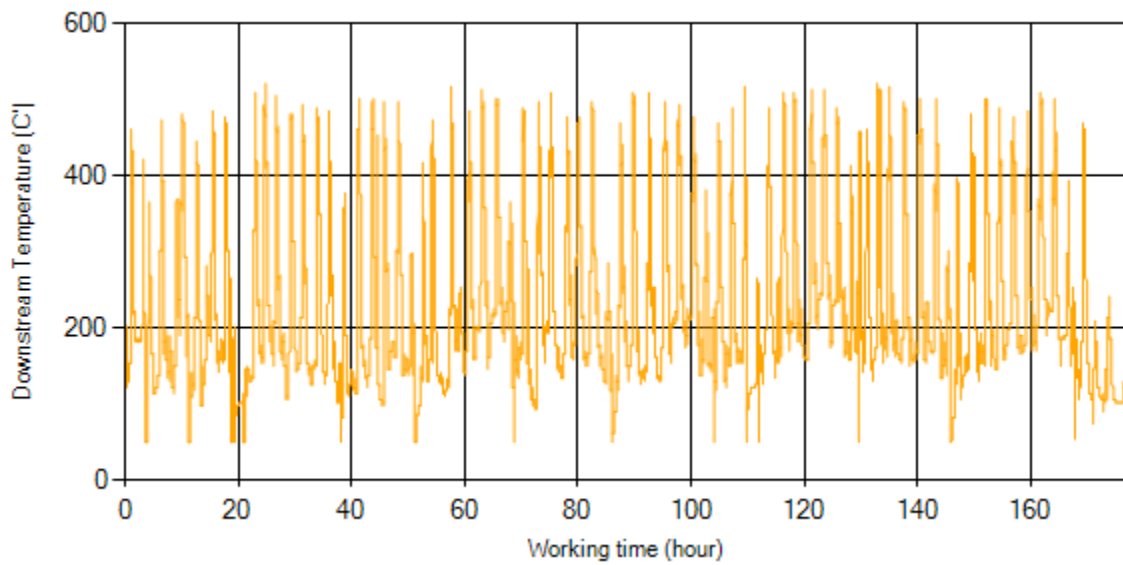*Figure 8- Temperature vs. working hours*

Figure 9- Temperature vs. working hours
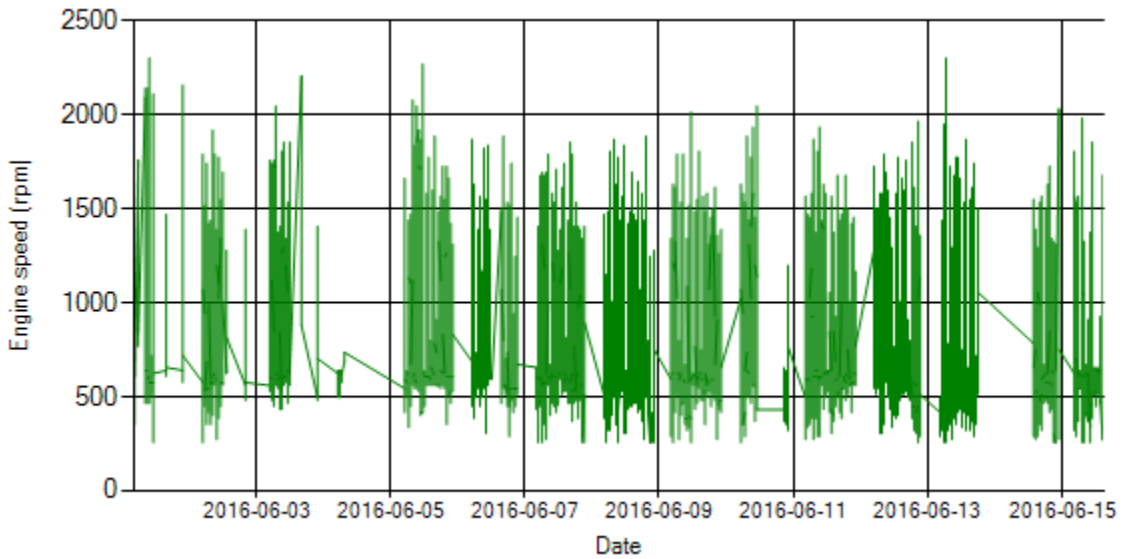
Engine Speed Diagrams

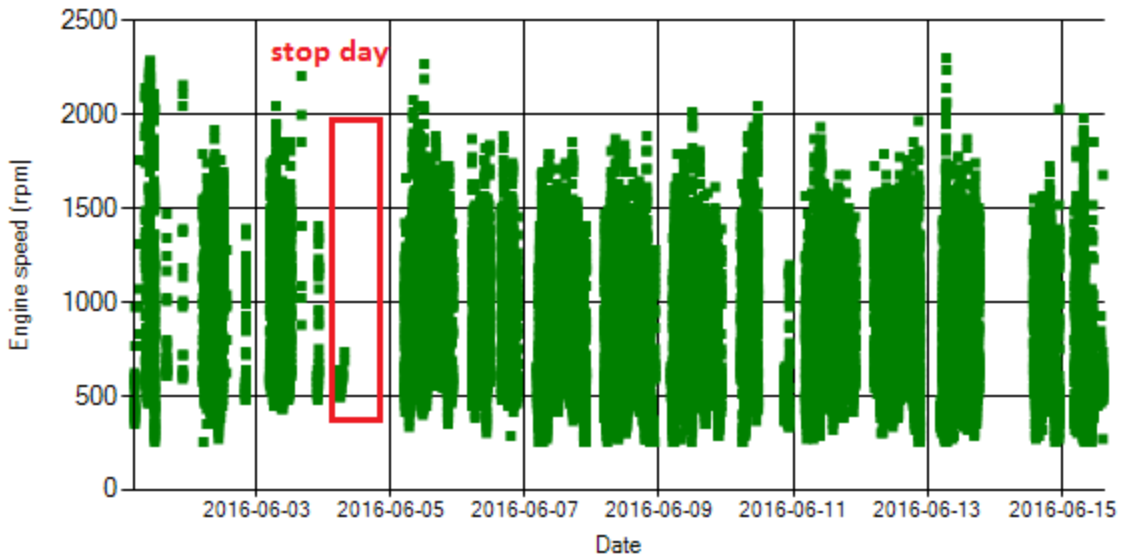*Figure 10- Engine speed distribution over the period*

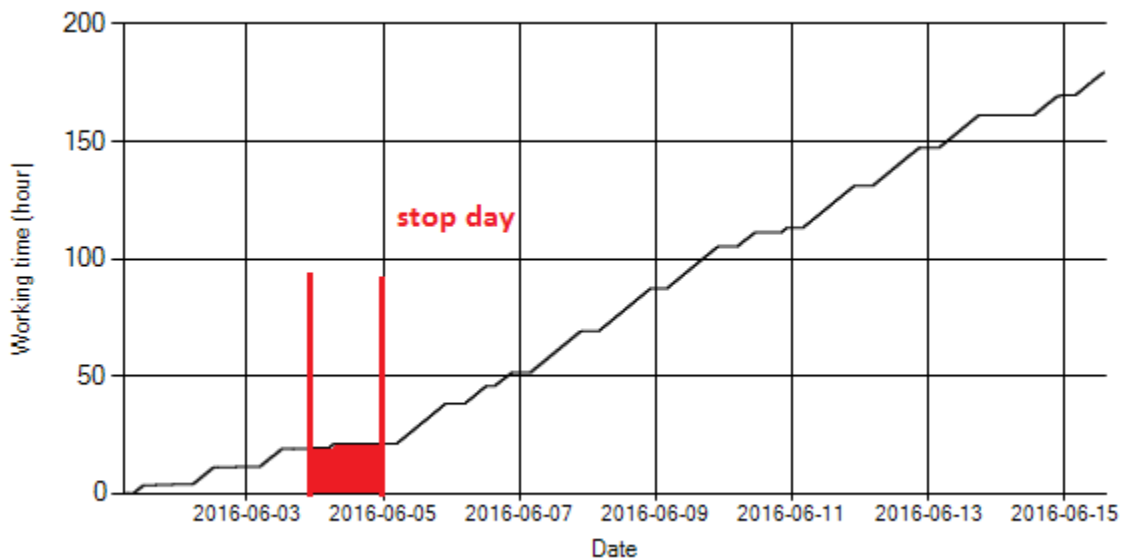*Figure 11- Engine speed diagram for calculating CPK's working days*

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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 the bus was stationary for 1 day.
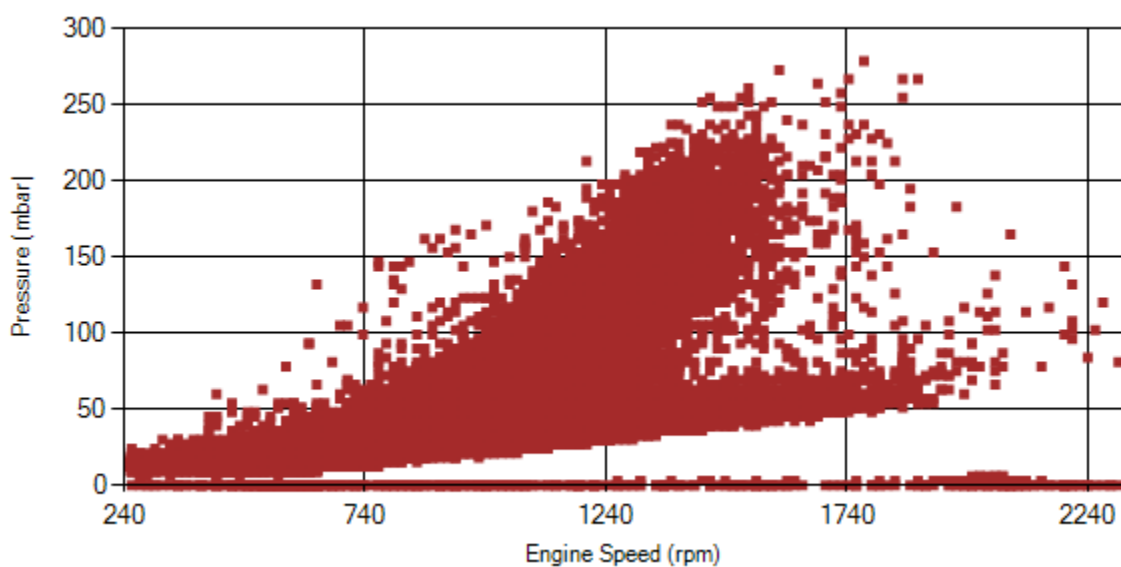
Pressure-Engine Speed diagrams
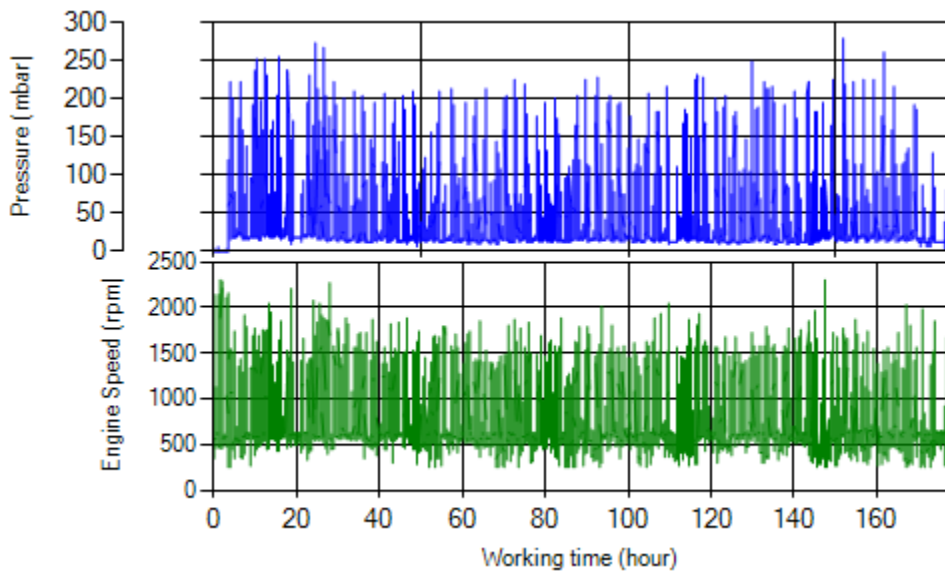

Figure 13- Pressure against engine speed

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Figure 14- P, N distribution vs. working hours

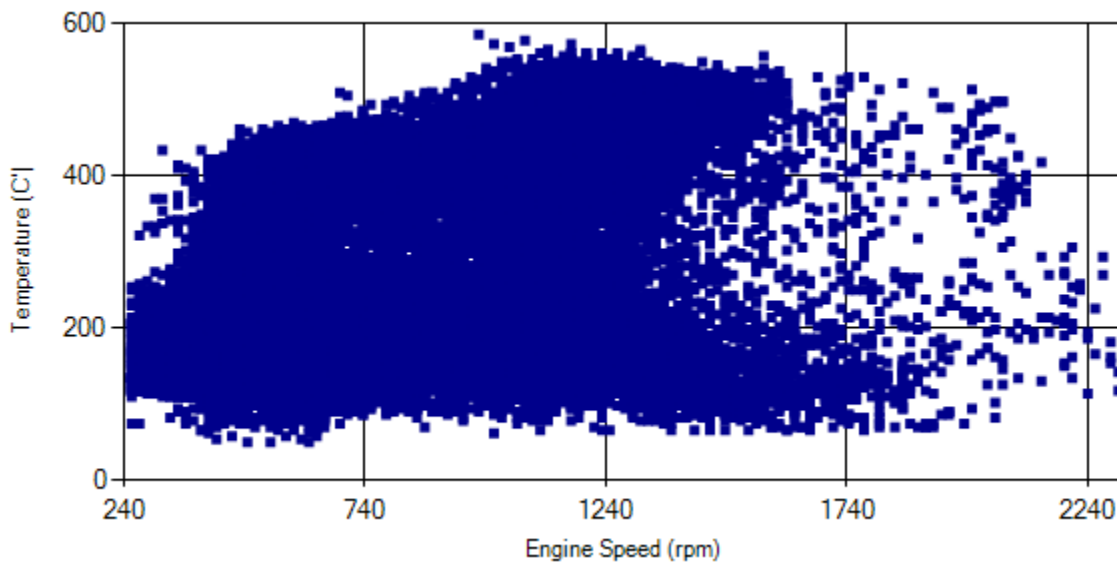## Temperature-Engine Speed diagrams

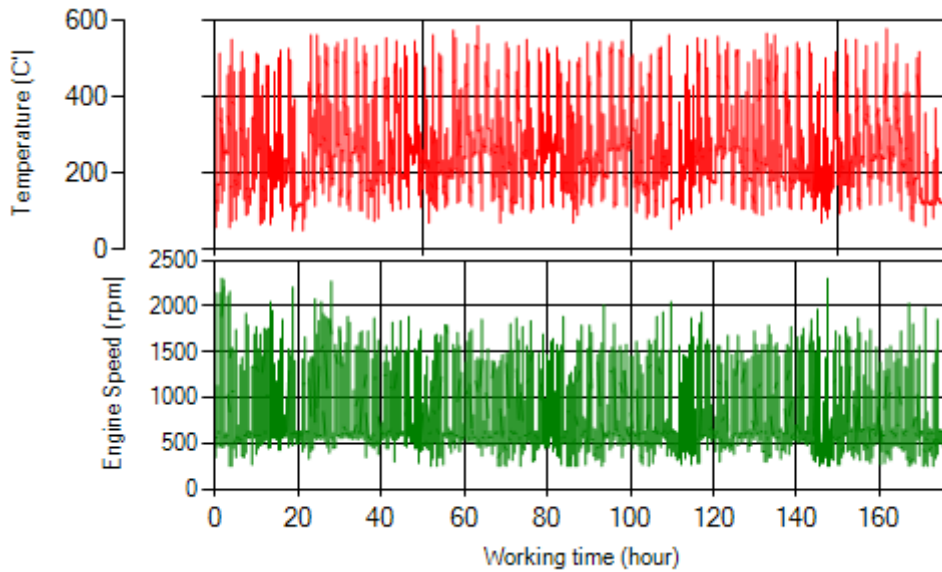*Figure 15- Temperature against engine speed*

Figure 16- T, N distribution vs. working hours

Filter Operation Analysis

- As depicted in Figure 1, 0.46% of working time, pressure was above 200 mbar and 2.73% was above 150 mbar.
- Figure 2 displays flow temperature before the DPF. It can be obviously observed that 13.3% of total working time temperature is above 400 ℃ and 18.1% above 350℃.

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

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