

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	16/Nov/2015 – 30/Nov/2015 (fifteen days)
K value - DPF upstream	1.90 [1/m]
K value – DPF downstream	0.04 [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	DPF was cleaned on 22 nd Jul.
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)	42066 km
Bus mileage over the period	1726 km
Working days over the period	13 days
Stop days	2 days
Data logger working days	13 days
Working hours over the period	127 hours 13 minutes
Average working hours per day (including stop days)	8 hours 28 minutes
Bus average speed	13.57 km/hr
idle speed time to all working time ration	64.87 %
Total Bus fuel consumption over the period	1100 lit
Fuel consumption per hour	8.65 lit/hr
Average fuel consumption	0.64 lit/km
Total Bus additive consumption over the period	0.5 lit
Average additive consumption	290 cc/km
Additive consumption to fuel ration	455 cc/1000lit

Temperature, Pressure and Engine Speed Overview

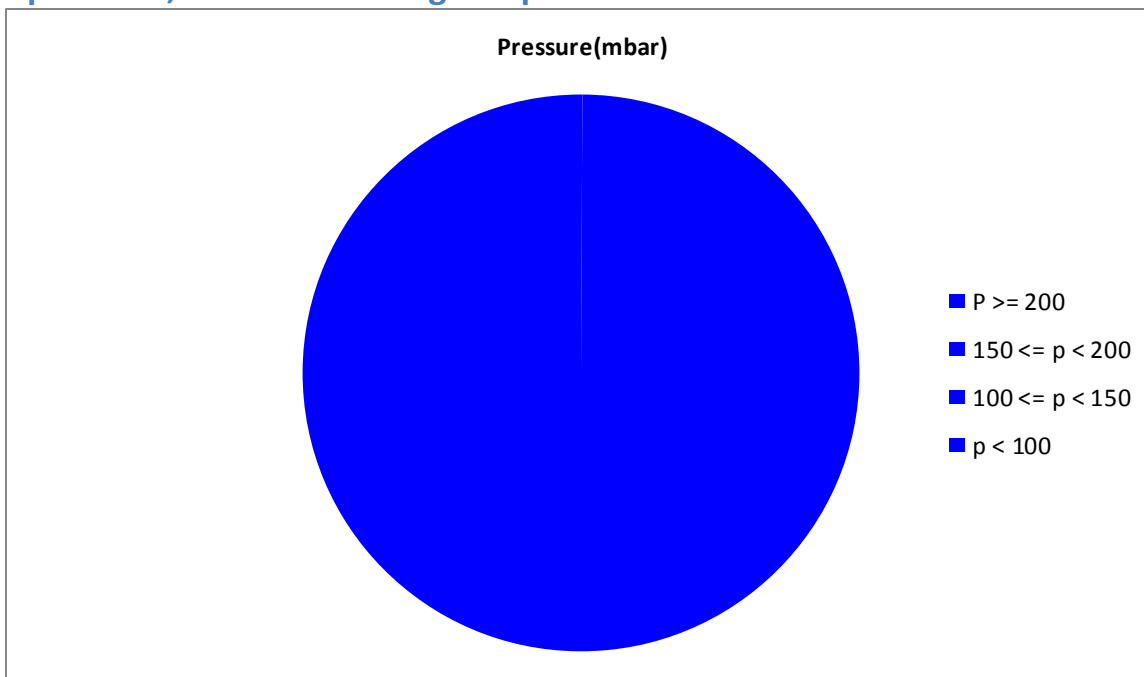


Figure 1- Pressure distribution over the working hours

Notice: Pressure sensor got problem on Nov 11th and was fixed on Nov 29th. So pressure pie diagram was left blank due to data leakage.

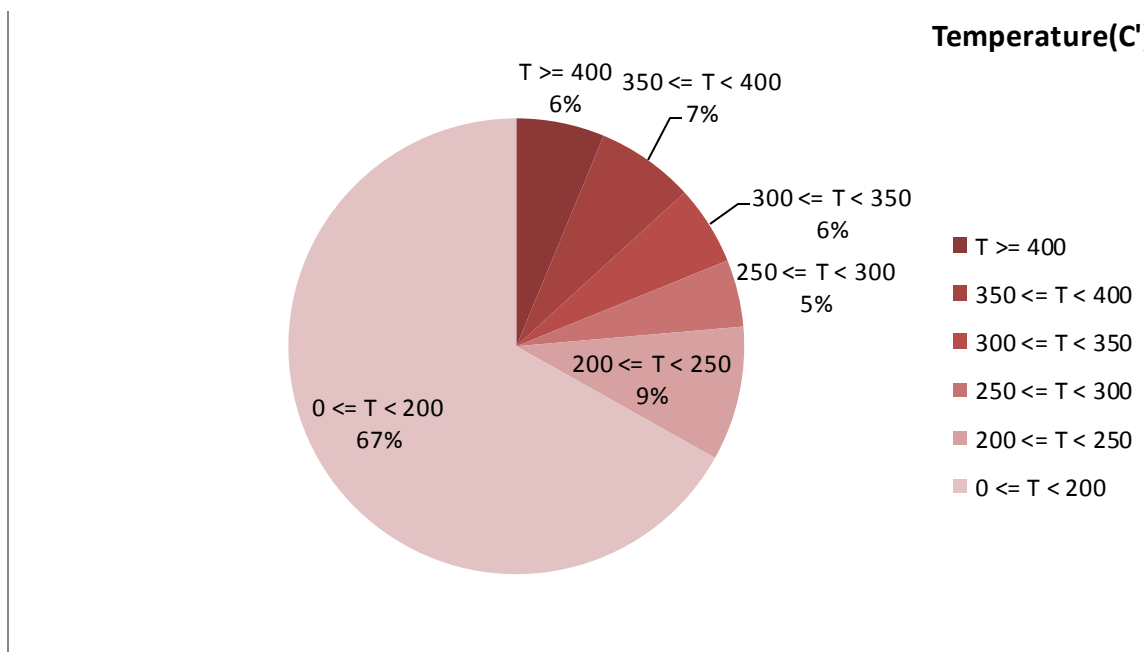


Figure 2-Temperature distribution over the working hours

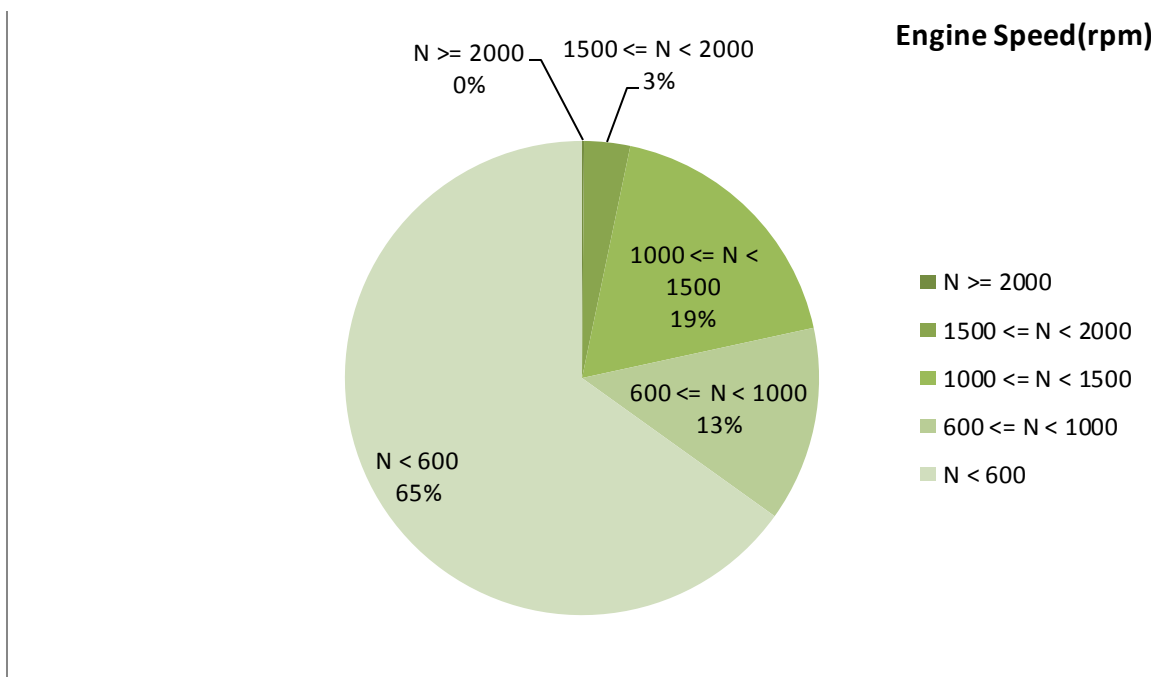


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
204.57	-	750

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
271.74	-	1083

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
506-50	-	2320-256

Notice: pressure values were left blank due to data leakage.

Detailed Pressure Analysis

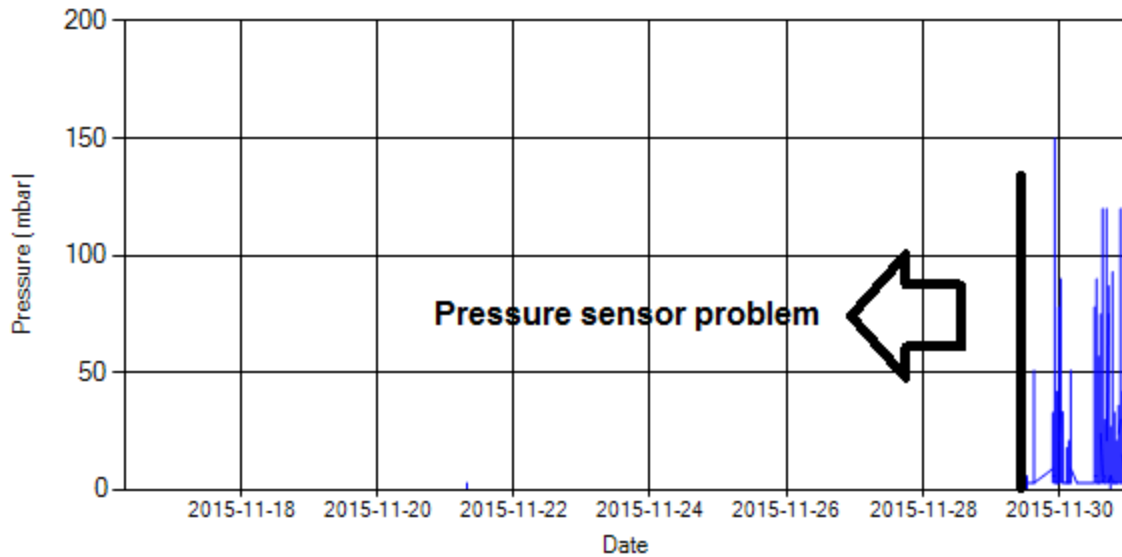


Figure 4- Pressure distribution over the period

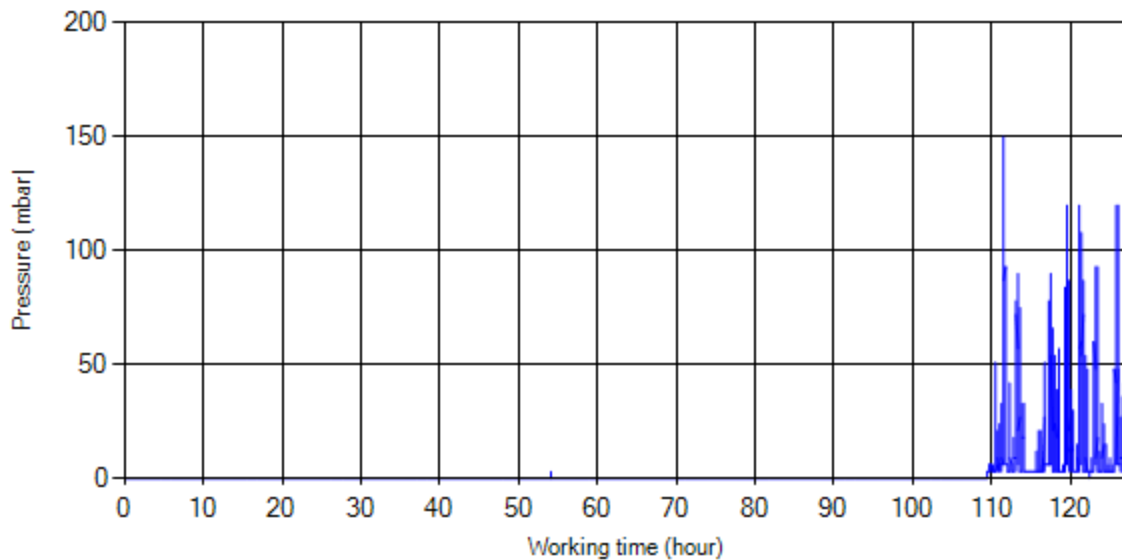


Figure 5- Pressure vs. working hours

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

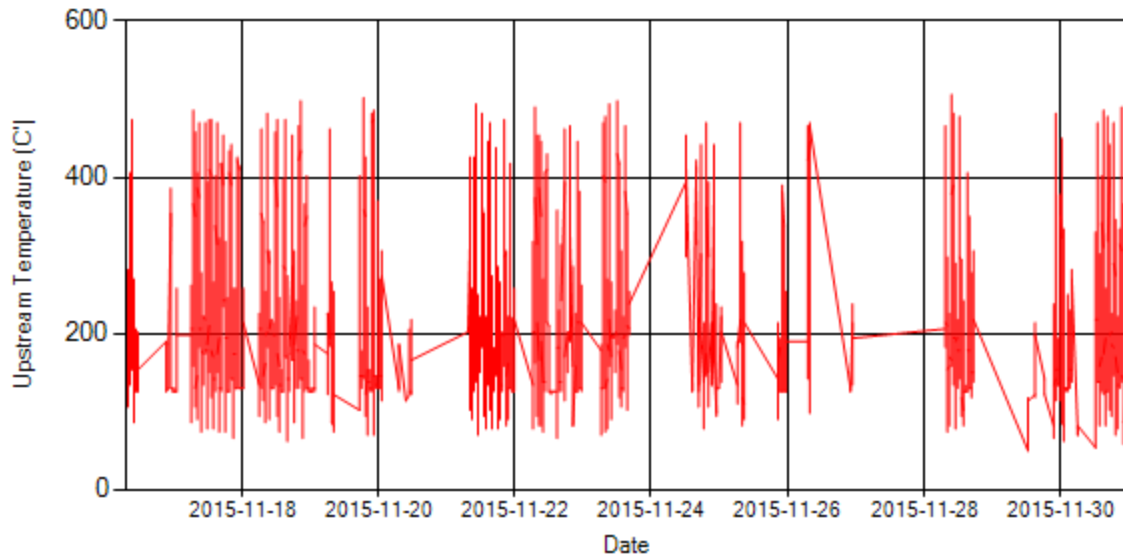


Figure 6- Temperature distribution over the period

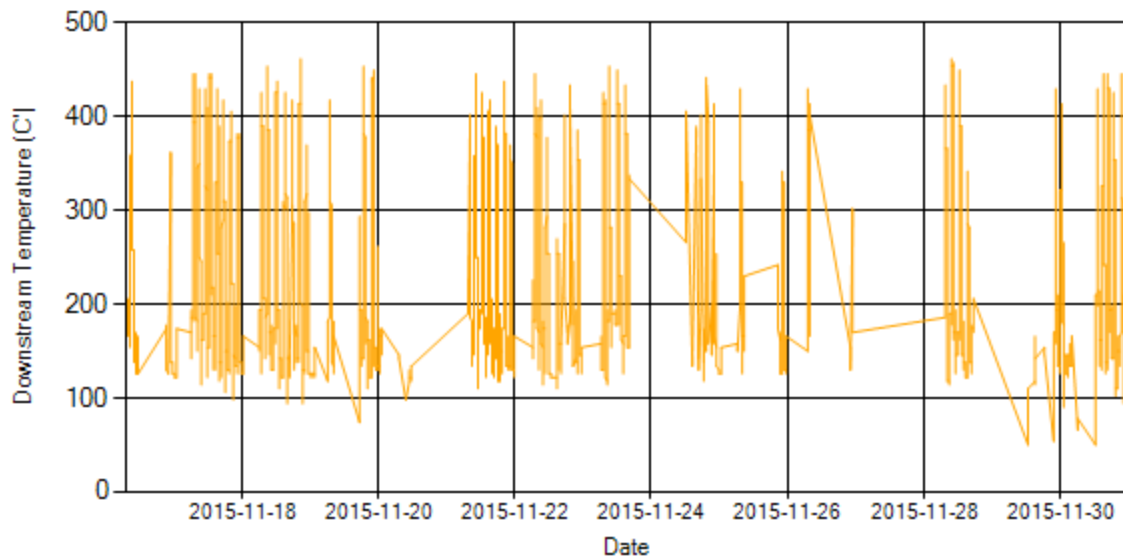


Figure 7- Temperature distribution over the period

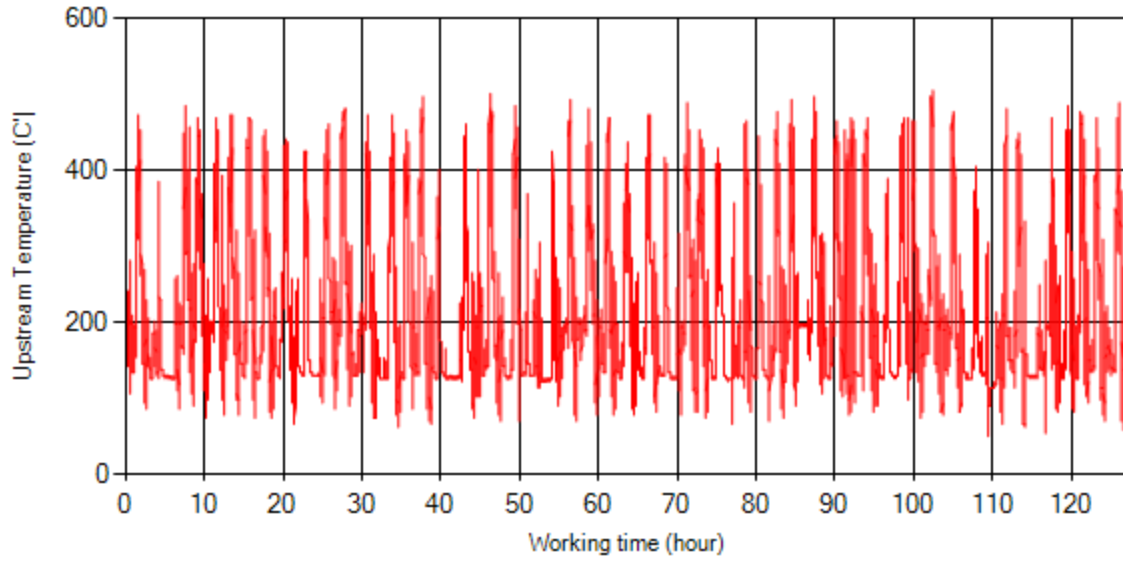


Figure 8- Temperature vs. working hours

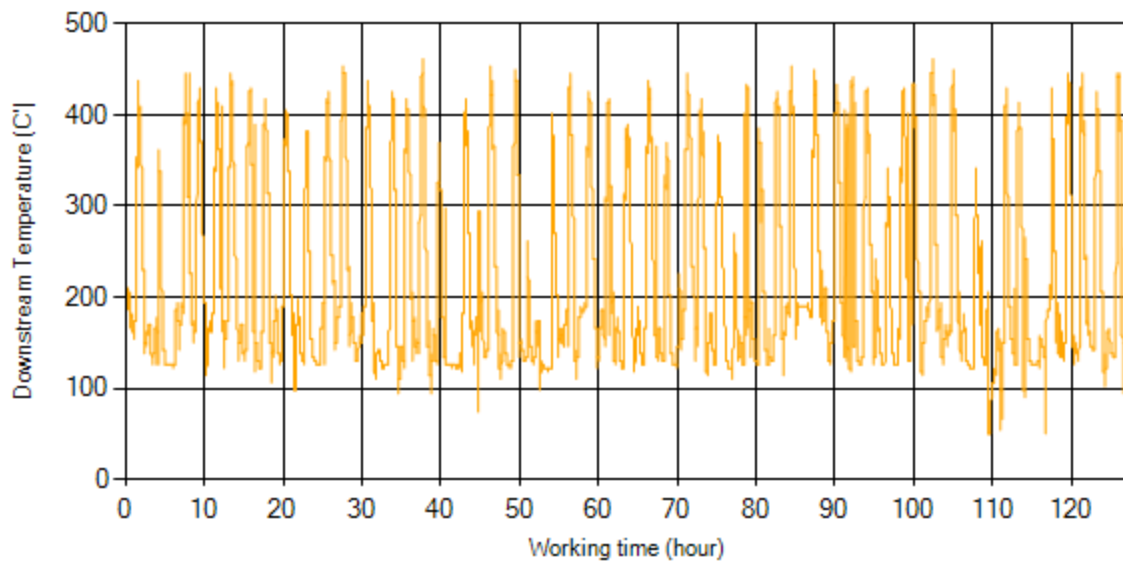


Figure 9- Temperature vs. working hours

Engine Speed Diagrams

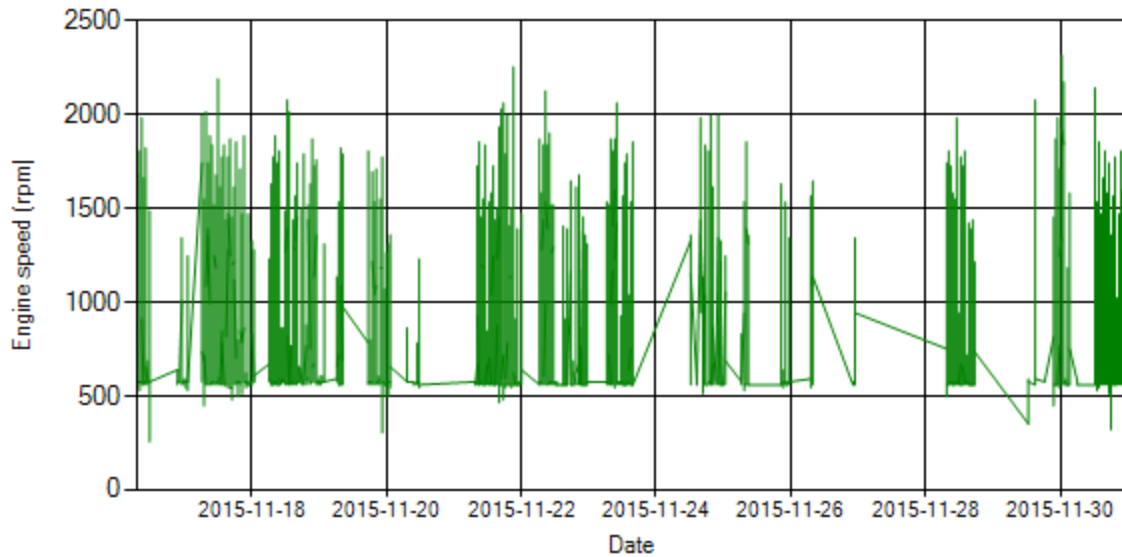


Figure 10- Engine speed distribution over the period

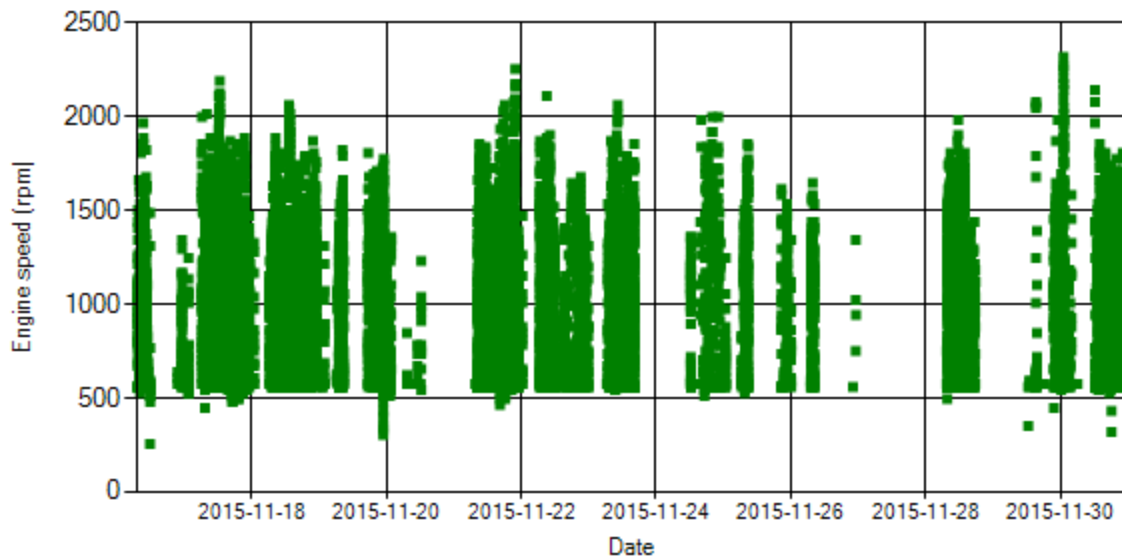


Figure 11- Engine speed diagram for calculating CPK's working days

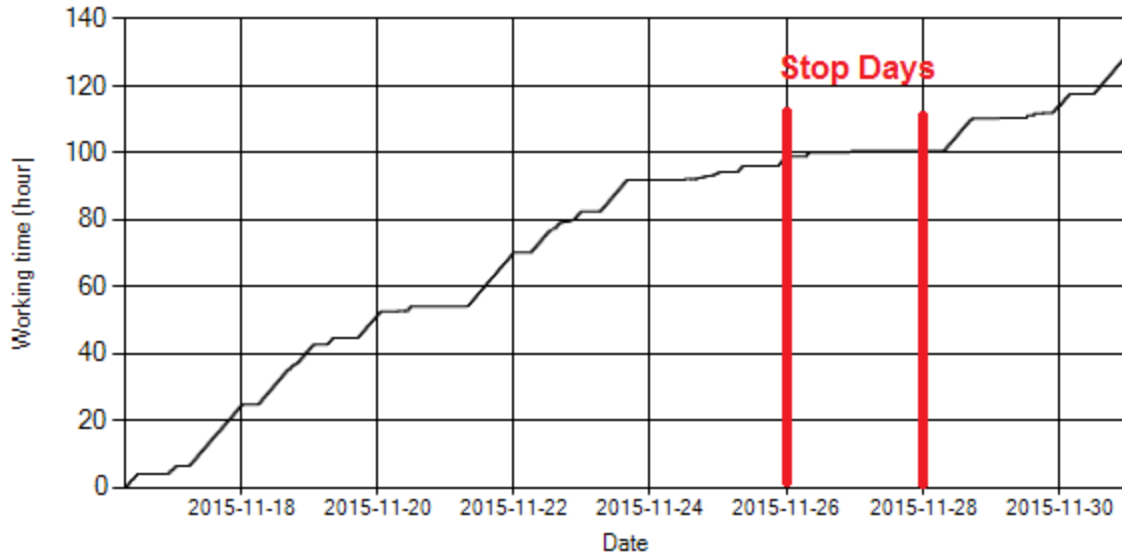


Figure 12- Time diagram for calculating CPK's working days

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

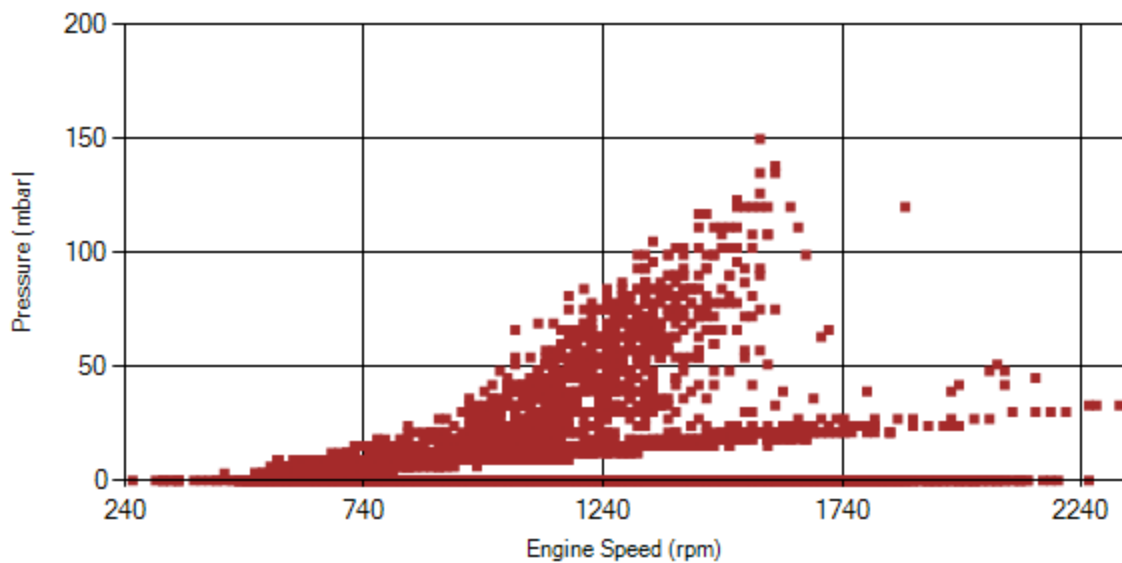


Figure 13- Pressure against engine speed

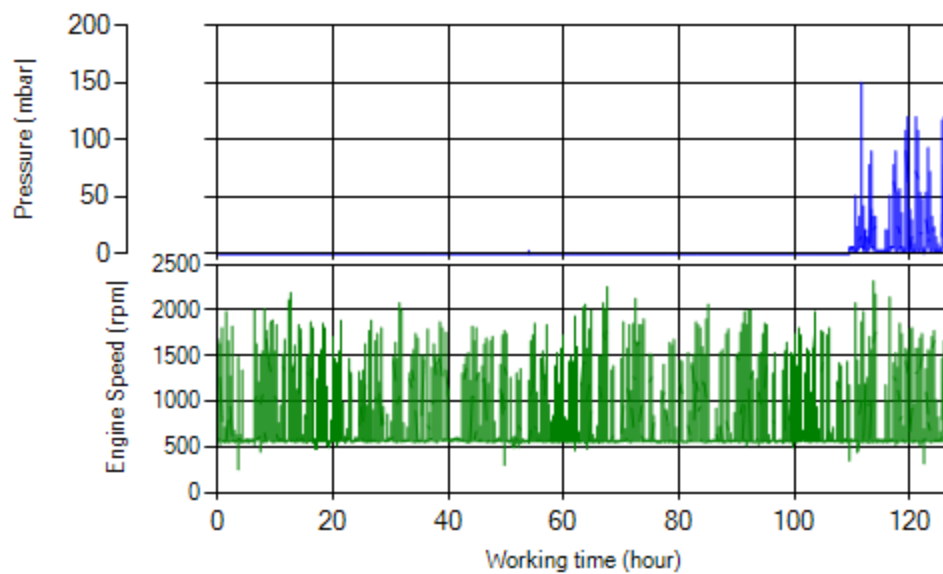


Figure 14- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

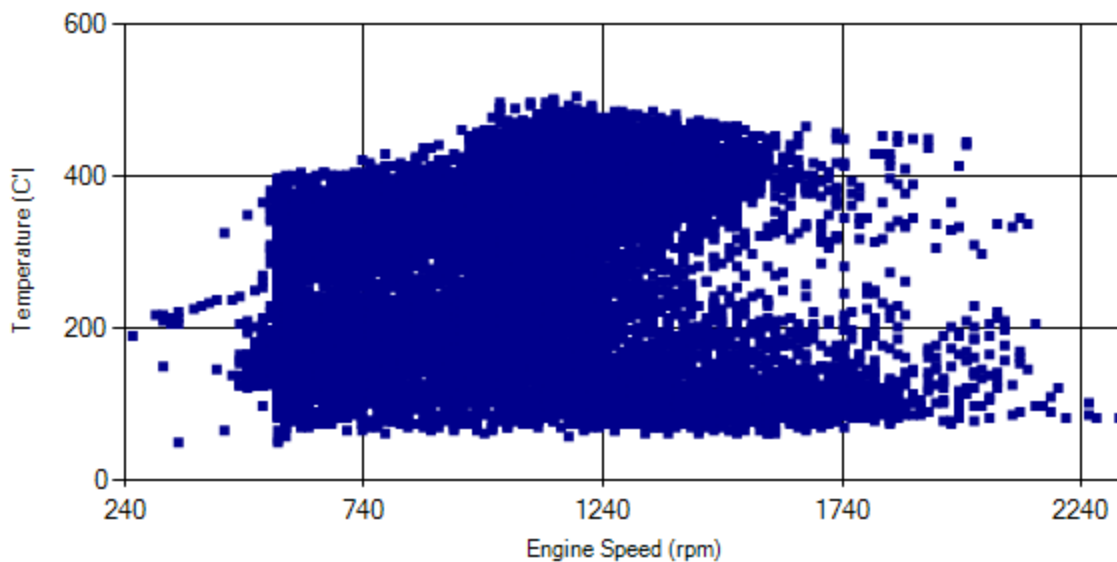


Figure 15- Temperature against engine speed

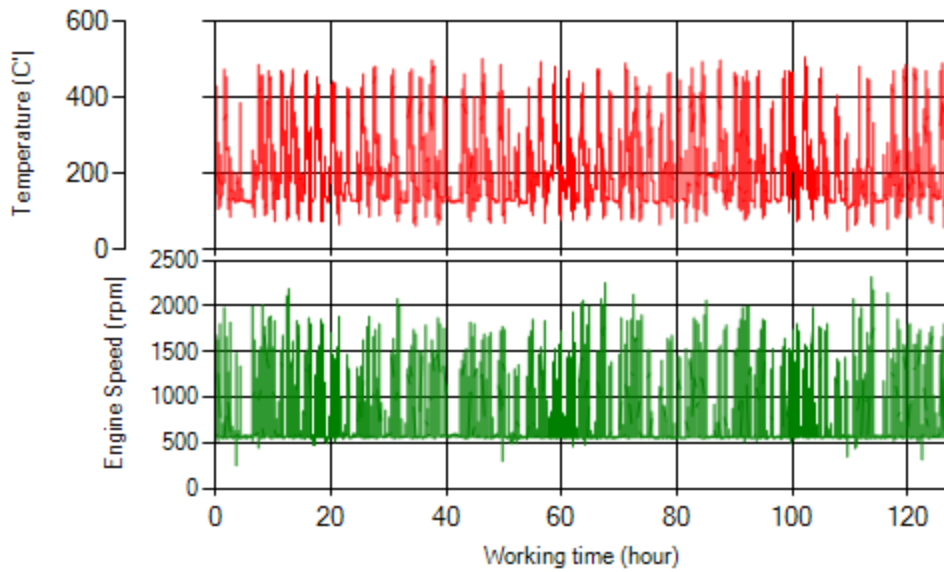


Figure 16- T, N distribution vs. working hours

Filter Operation Analysis

- As depicted in figure 1, there wasn't enough data to evaluate DPF operation status exactly because of pressure sensor problem (**excellent or good**).
- Considering October last ten days (figure 2), it can be obviously observed that 6% of total working-time temperature is above 400 °C and 13% above 350°C.

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