

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/Oct/2015 – 31/Oct/2015 (sixteen days)
K value - DPF upstream	1.80 [1/m]
K value – DPF downstream	0.02 [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)	38213 km
Bus mileage over the period	2569 km
Working days over the period	15 days
Stop days	1 day
Data logger working days	15 days
Working hours over the period	196 hours 56 minutes
Average working hours per day (including stop days)	11 hours 34 minutes
Bus average speed	13.04 km/hr
idle speed time to all working time ration	56.52 %
Total Bus fuel consumption over the period	1593 lit
Fuel consumption per hour	8.09 lit/hr
Average fuel consumption	0.62 lit/km
Total Bus additive consumption over the period	0.661 lit
Average additive consumption	257 cc/km
Additive consumption to fuel ration	415 cc/1000lit

Temperature, Pressure and Engine Speed Overview

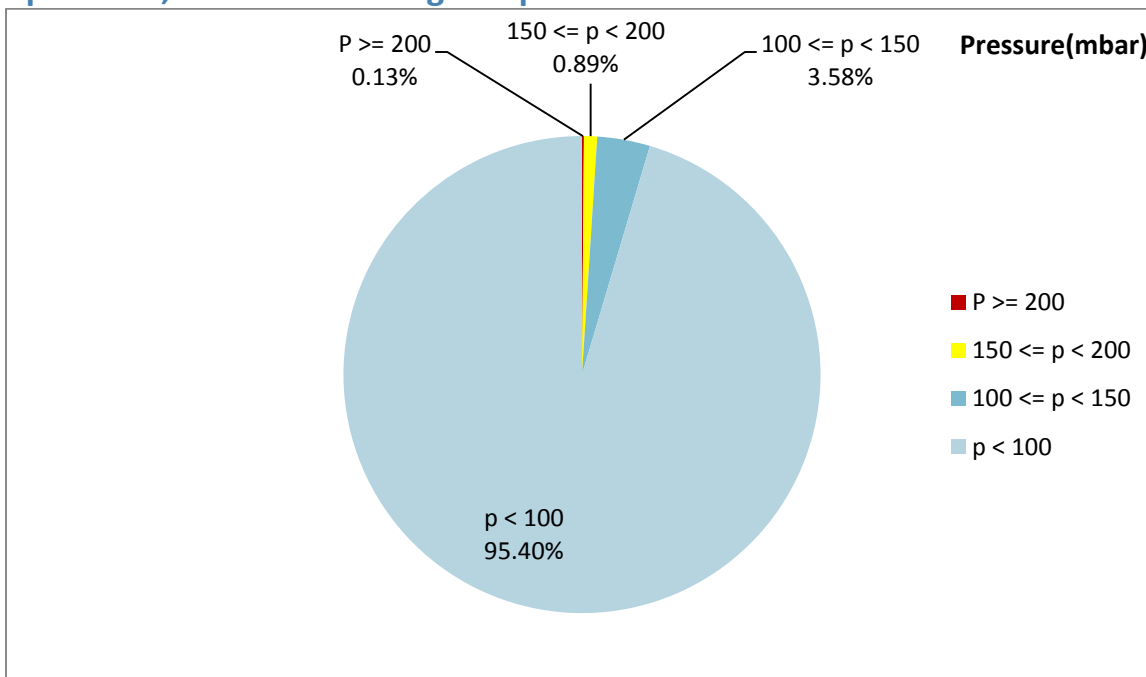


Figure 1- Pressure distribution over the working hours

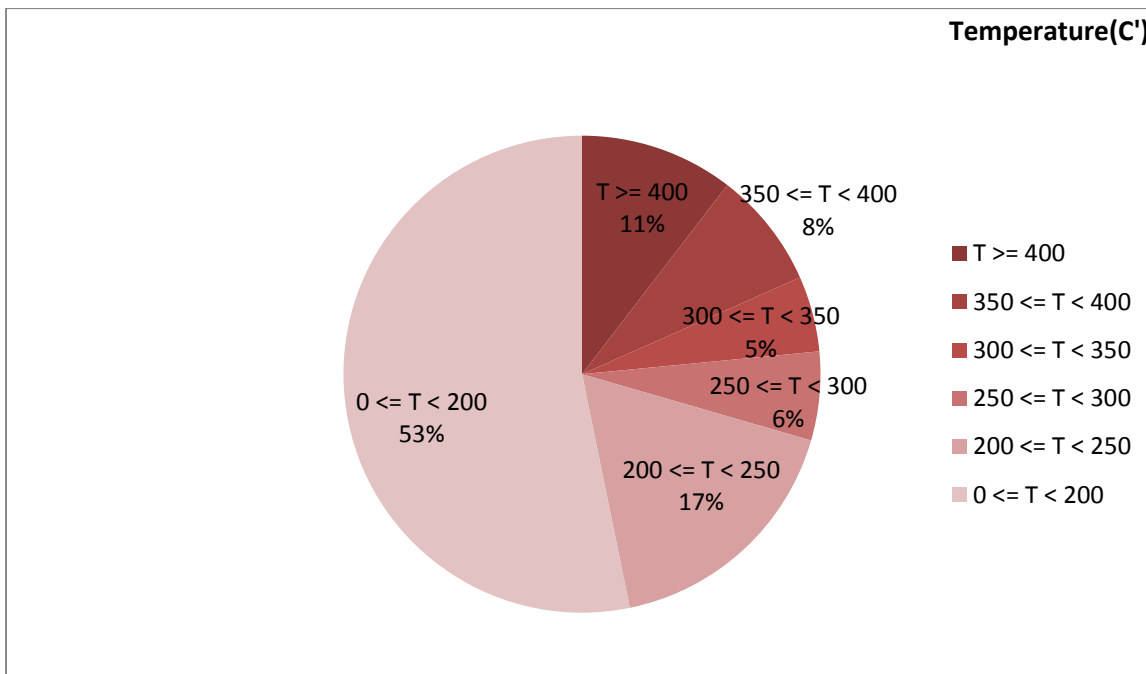


Figure 2-Temperature distribution over the working hours

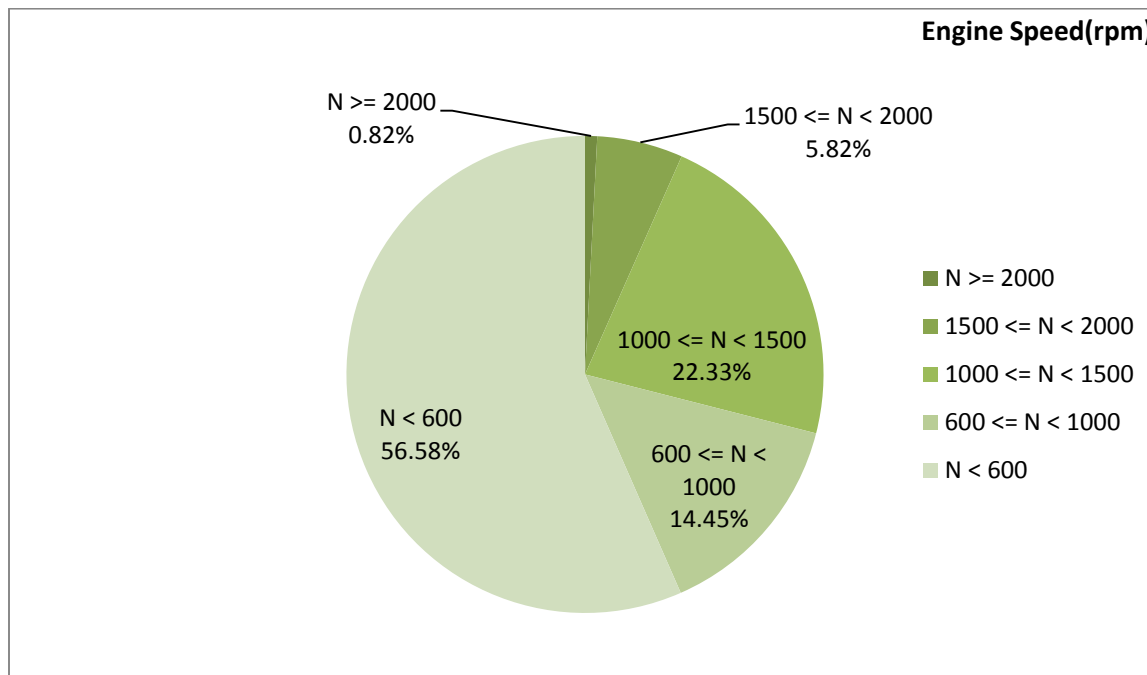


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
226.64	24.2	830

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
285.24	44.92	1152

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
534-50	270-3	2560-304

Notice: Temperature 1 and 2 data were incorrect from Nov 12th to Nov 20th, because of temp 2 sensor's short circuit problem. Temp 2 sensor was removed on Nov 20th, so last 10 days (Nov-21st to Nov-31st) temperature's data were used for providing figure 2 and tables 4,5,6 .

Detailed Pressure Analysis

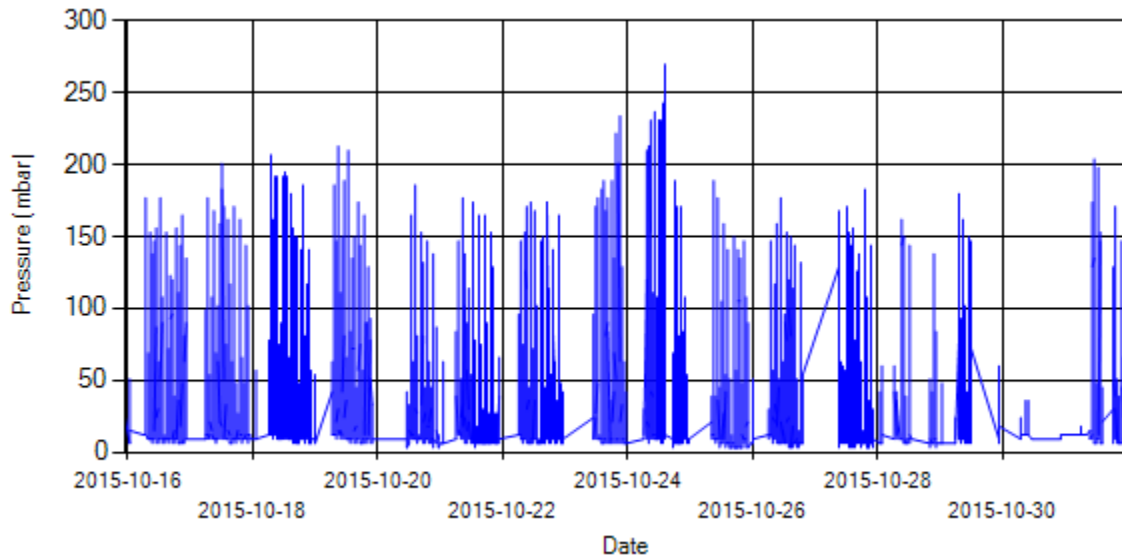


Figure 4- Pressure distribution over the period

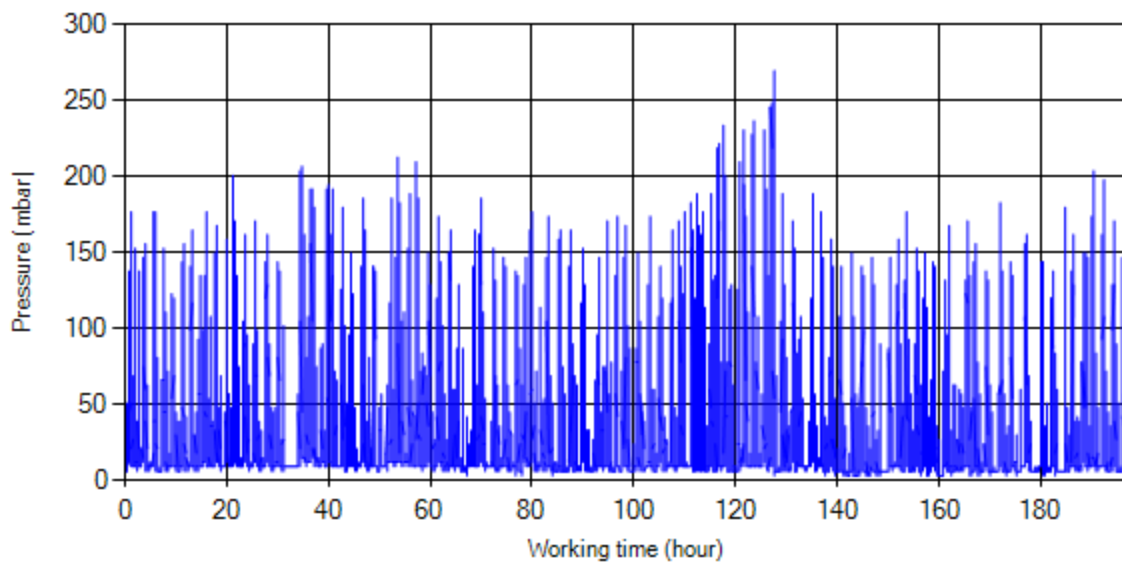


Figure 5- Pressure vs. working hours

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

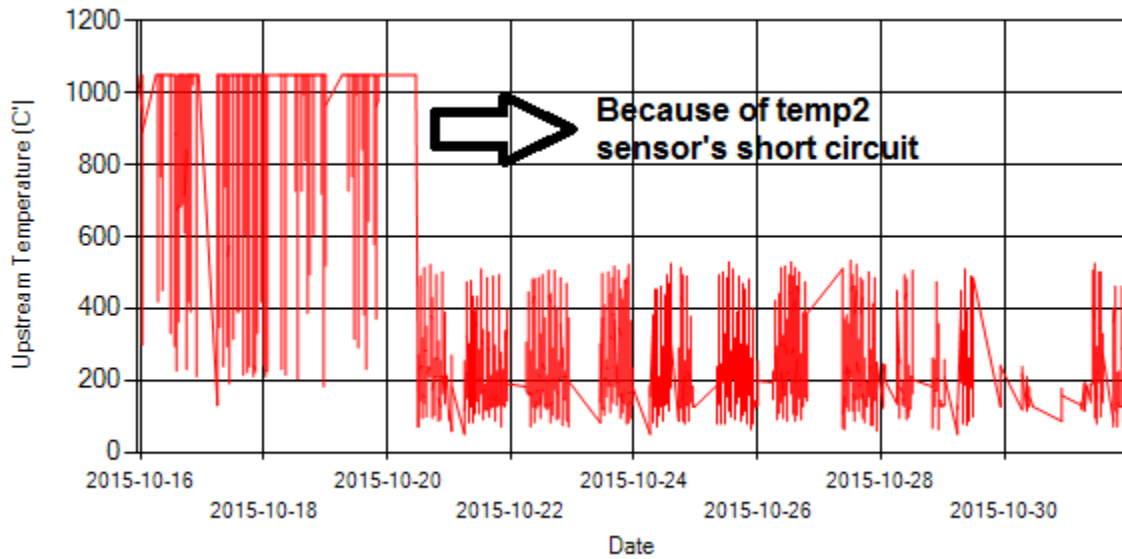


Figure 6- Temperature distribution over the period

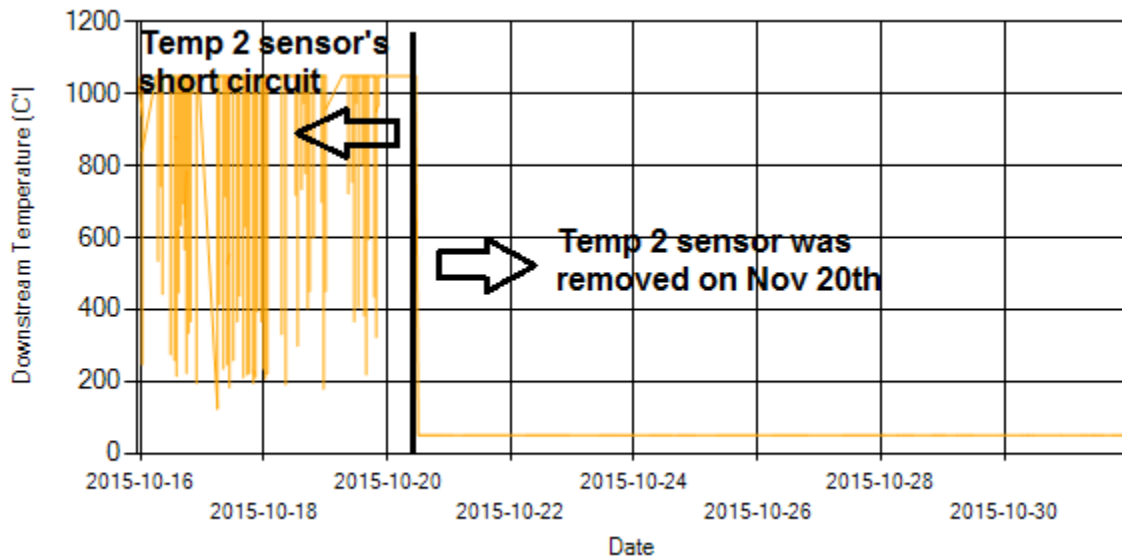


Figure 7- Temperature distribution over the period

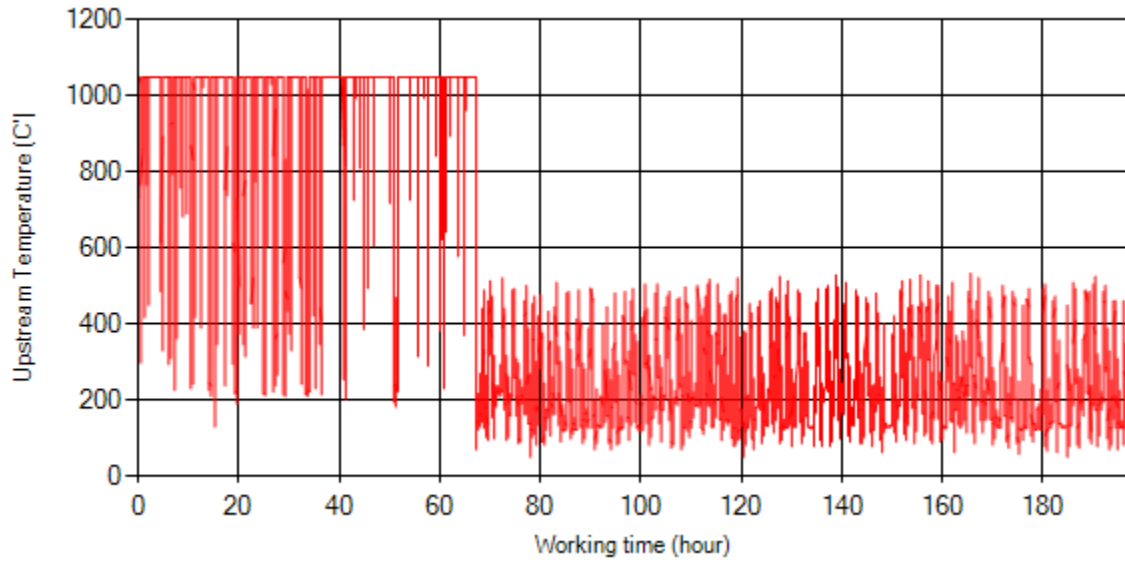


Figure 8- Temperature vs. working hours

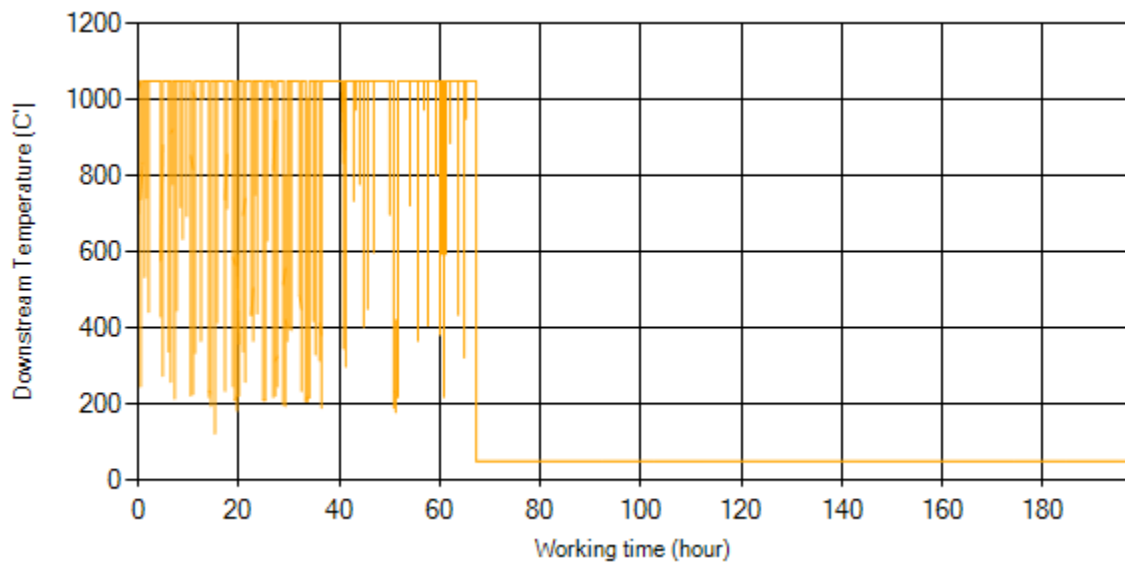


Figure 9- Temperature vs. working hours

Engine Speed Diagrams

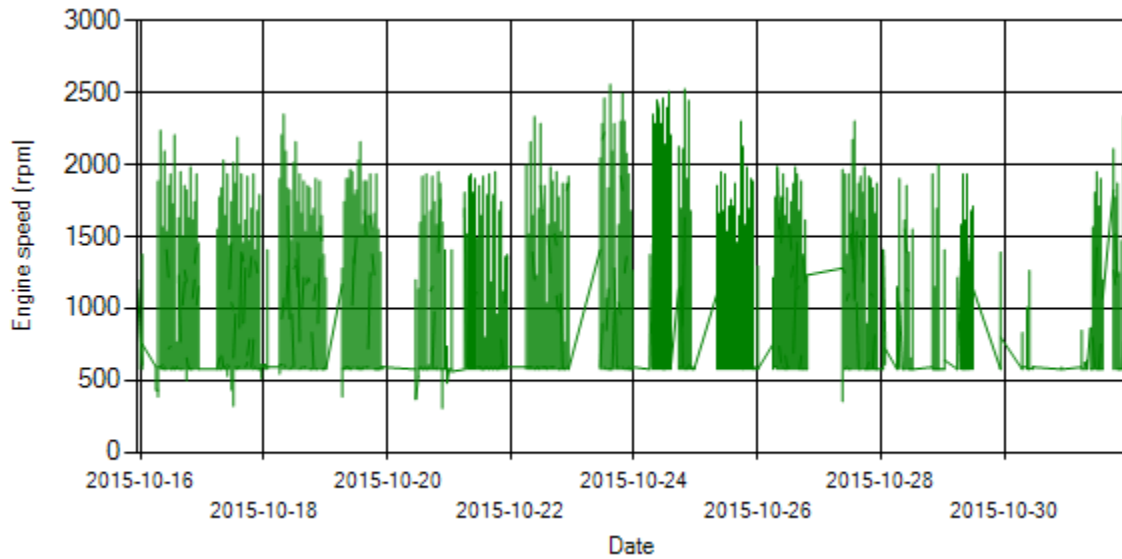


Figure 10- Engine speed distribution over the period

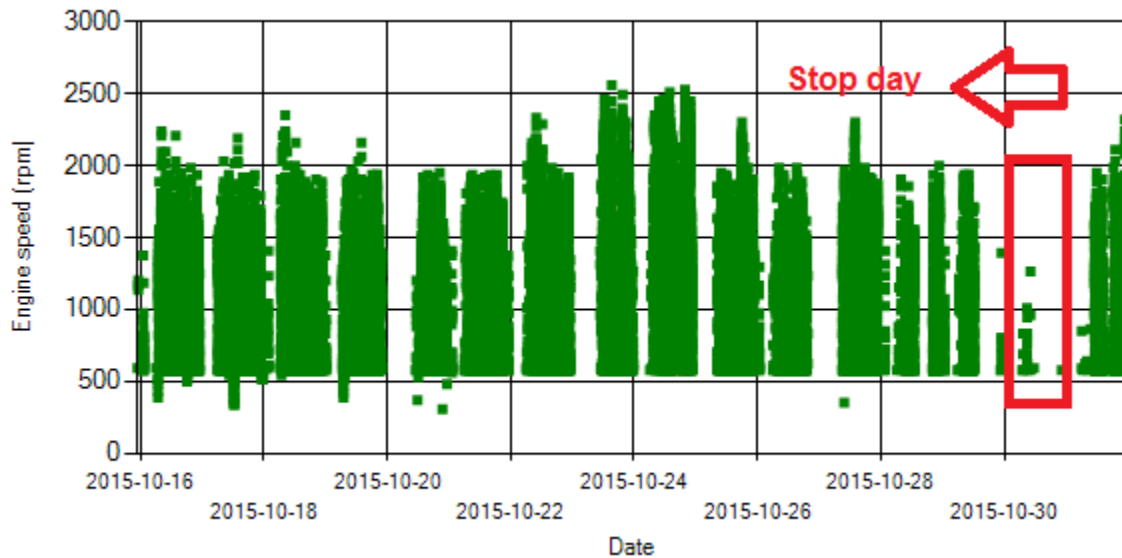


Figure 11- Engine speed diagram for calculating CPK's working days

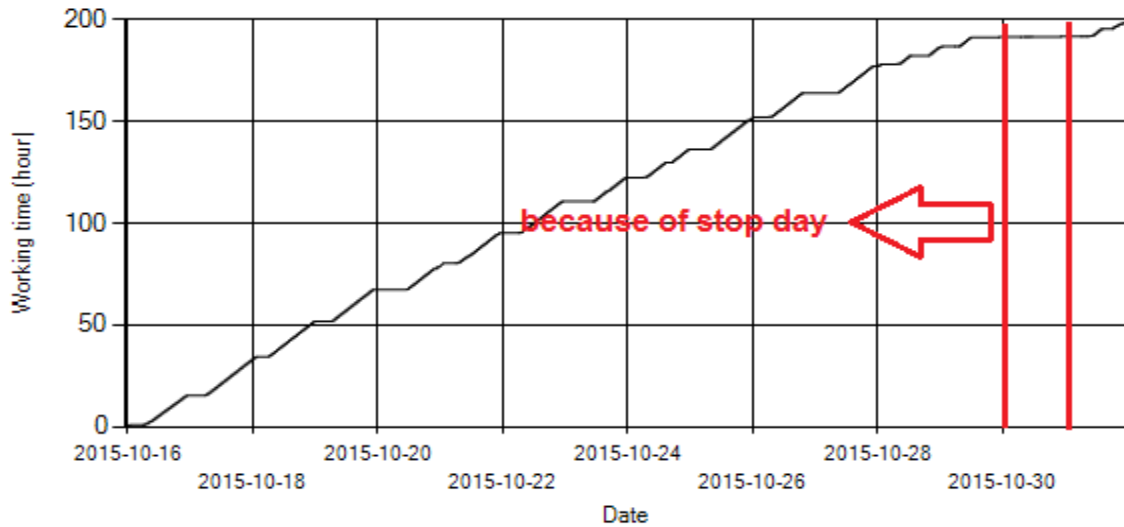


Figure 12- Time diagram for calculating CPK's working days

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, Nov 30th was stop day.

Pressure-Engine Speed diagrams

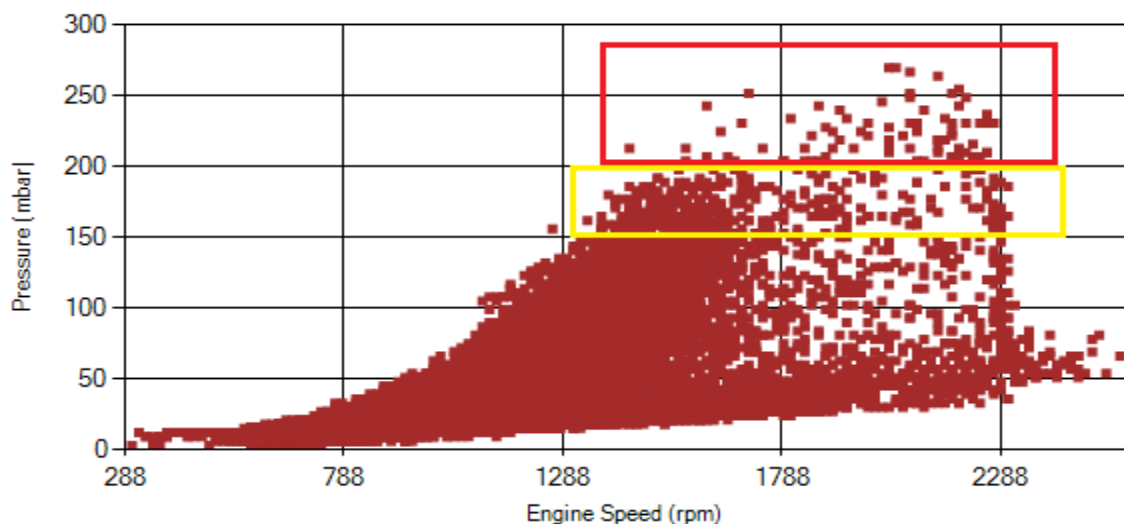


Figure 13- Pressure against engine speed

Notice: Red alarm (pressure > 200 mbar) and yellow alarm (200 > pressure > 150) ranges were indicated in figure 13.

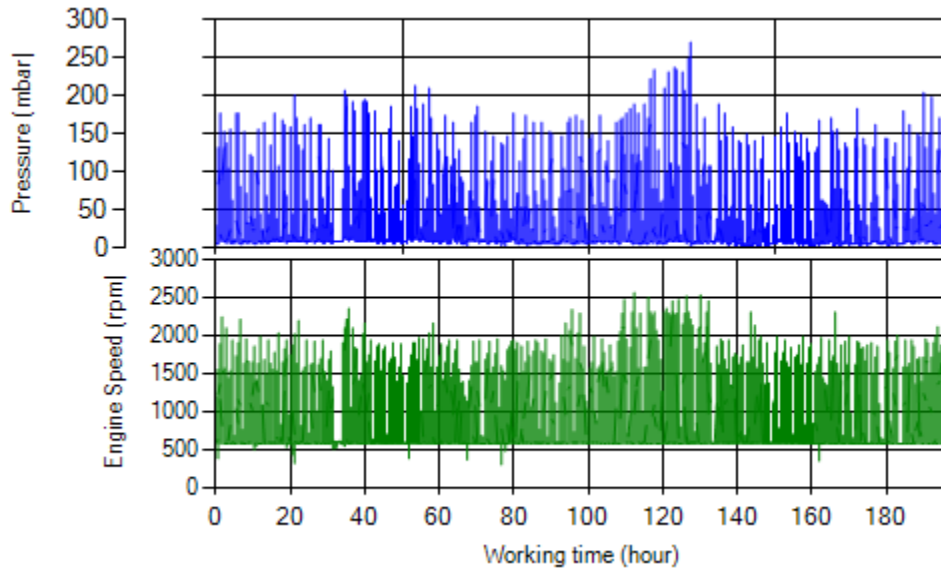


Figure 14- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

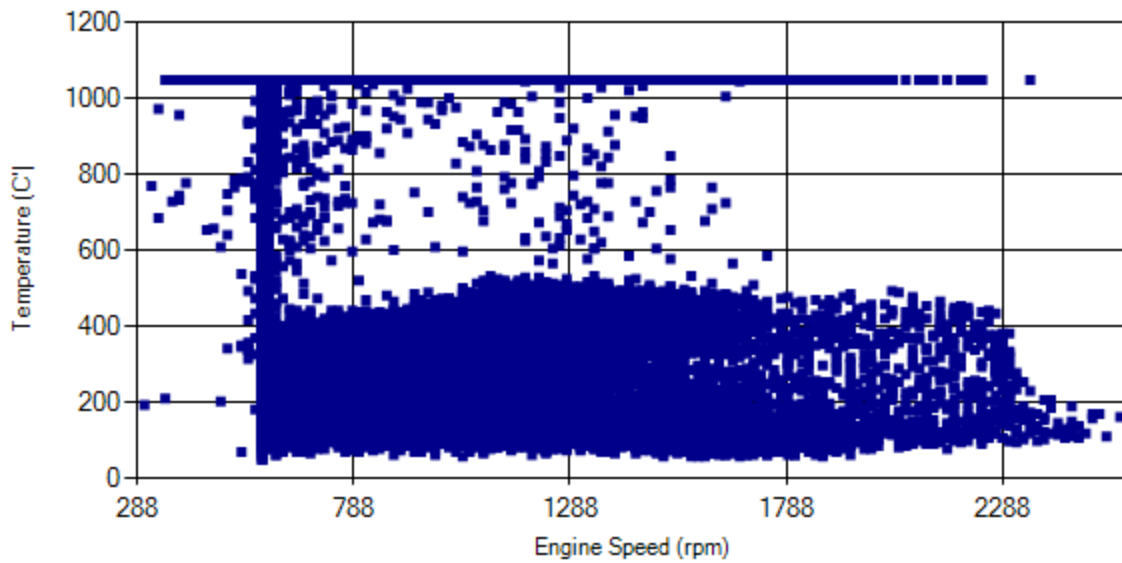


Figure 15- Temperature against engine speed

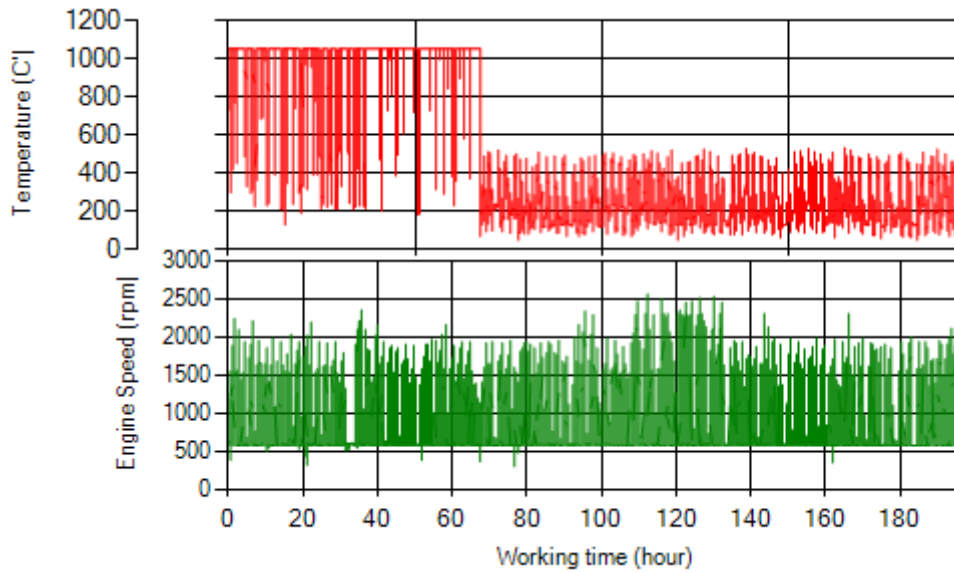


Figure 16- T, N distribution vs. working hours

Filter Operation Analysis

- As depicted in figure 1, 0.13% of total working time pressure is above 200 mbar and 1.02% above 150mbar.
- Considering October last ten days (figure 2), it can be obviously observed that 11% of total working-time temperature is above 400 °C and 19% above 350°C.

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