

Overall Information

Table1- Overall Information

Vehicle plate number	78524
CPK data logger number	LN: 001443, DN: 1930, Sim +989218786219
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	PURltech (Passive system with FBC)
Installation date	28/Jan/2015
Report period	16/Jul/2015 – 31/Jul/2015 (sixteen days)
K value – Muffler upstream	1.83 [1/m]
K value – Muffler downstream	1.83 [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	DPF core was removed on Jul 22 nd and was cleaned on Aug 12 th .*
Dosing status	Dosing value has been kept constant from installation date until now.

Notice: This high suspension was because of DPF cleaning machine late arrival. Bus was sent to line on Jul 23rd by replaced muffler, so during this period our system had not DPF system.

Table 3- Fuel and Additive Consumption Information

Bus mileage (from DPF installation date)	26029 km
Bus mileage over the period	2011 km
Working days over the period	8 days
Stop days	8 days
Data logger working days	8 days
Working hours over the period	140 hours 20 minutes
Average working hours per day (including stop days)	8 hours 46 minutes
Bus average speed	14.33 km/hr
Idle speed time to all working time ration	51 %*
Total Bus fuel consumption over the period	1165 lit
Fuel consumption per hour	8.30 lit/hr
Average fuel consumption	0.58 lit/km
Total Bus additive consumption over the period	-
Average additive consumption	-
Additive consumption to fuel ration	-

*Temperature data were used for calculating idle working ration.

Temperature, Pressure and Engine Speed Overview

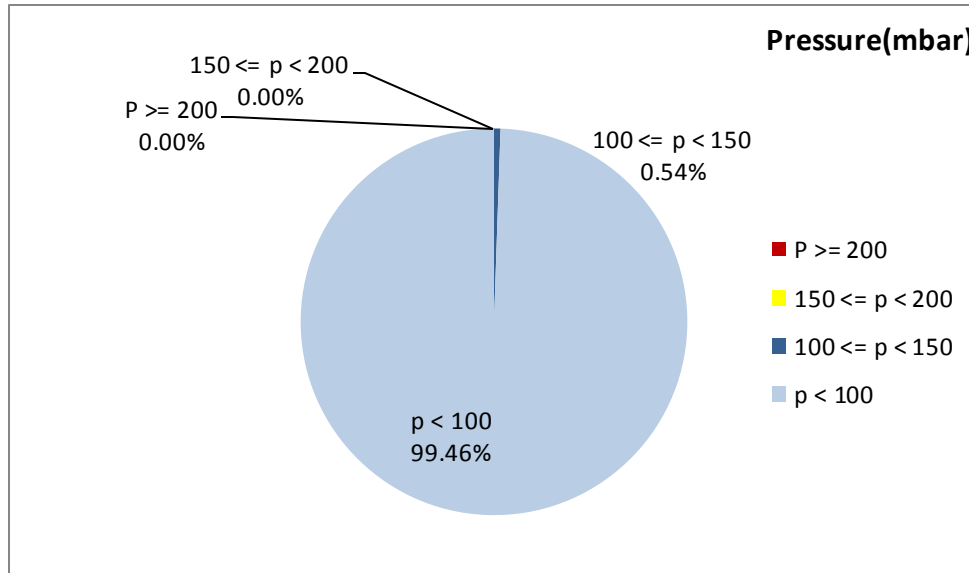


Figure 1- Pressure distribution over the working hours

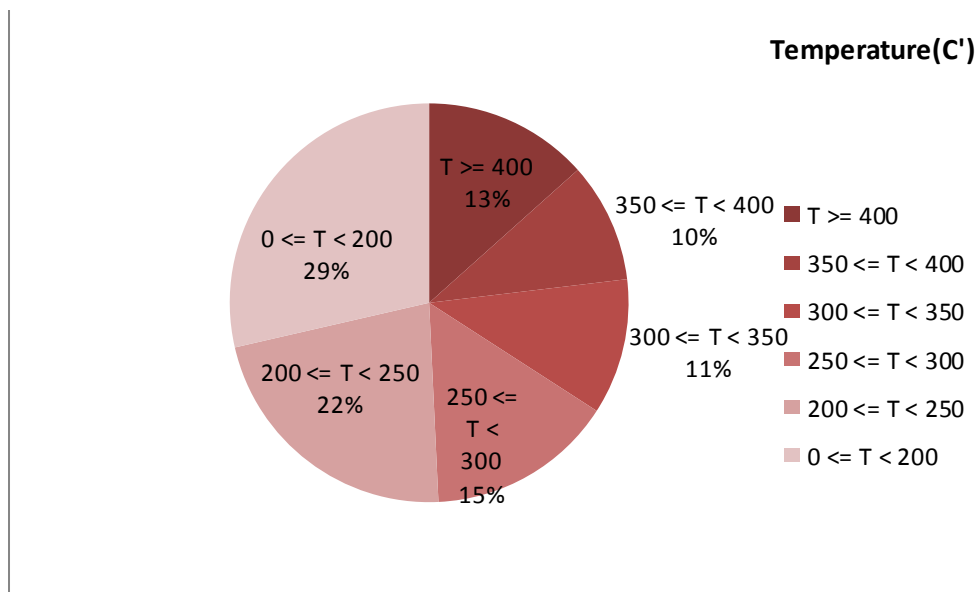


Figure 2-Temperature distribution over the working hours



Figure 3- Engine speed distribution over the working hours

Notice: All engine speed data missed due to rpm sensor problem.

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
265.35	7.34	-

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
340.02	13.90	-

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
562-50	117-0	-

Detailed Pressure Analysis

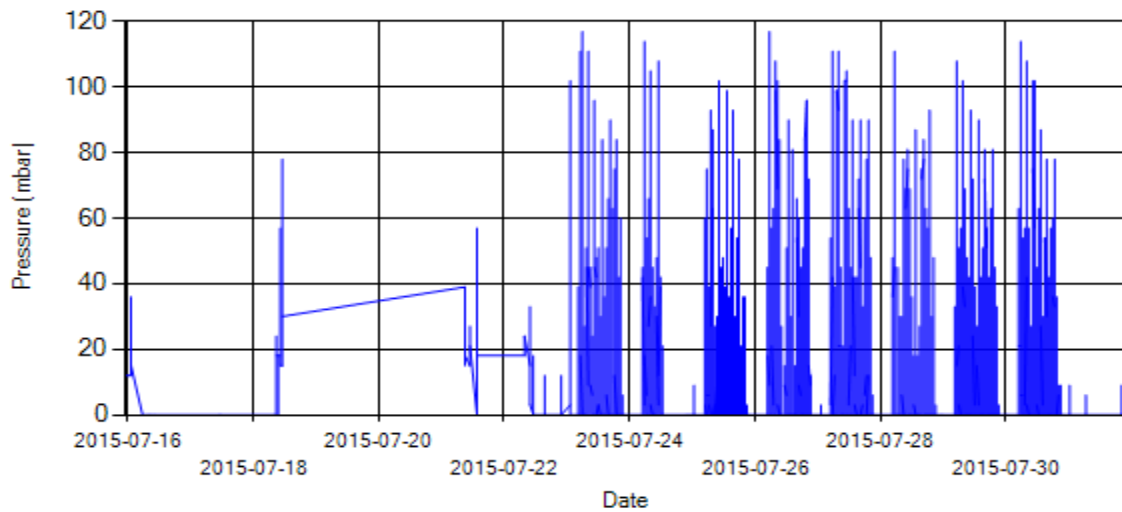


Figure 4- Pressure distribution over the period

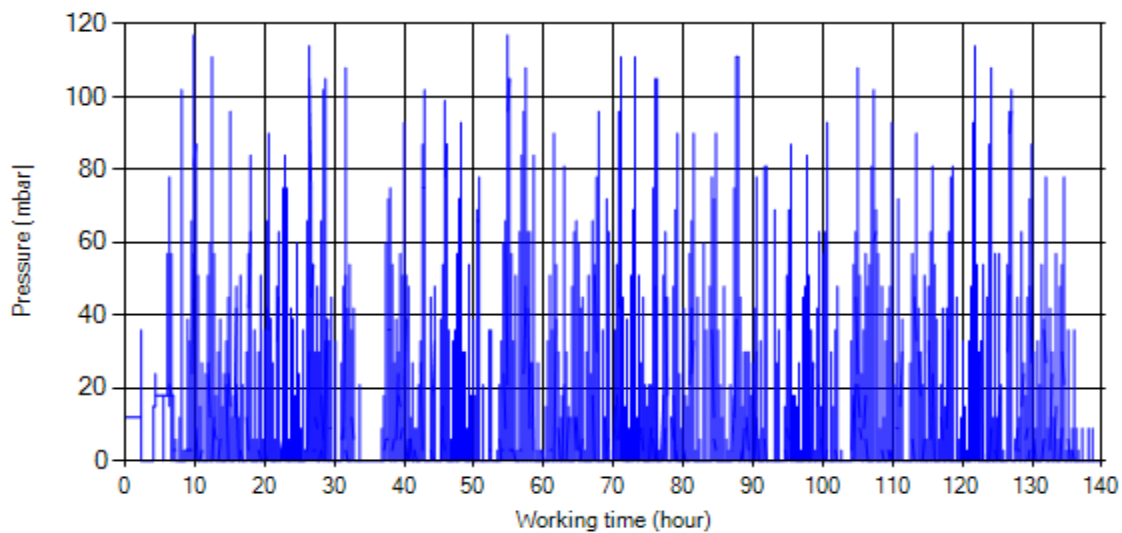


Figure 5- Pressure vs. working hours

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.

Notice: This pressure existence was due to muffler and DOC.

Detailed Temperature Analysis

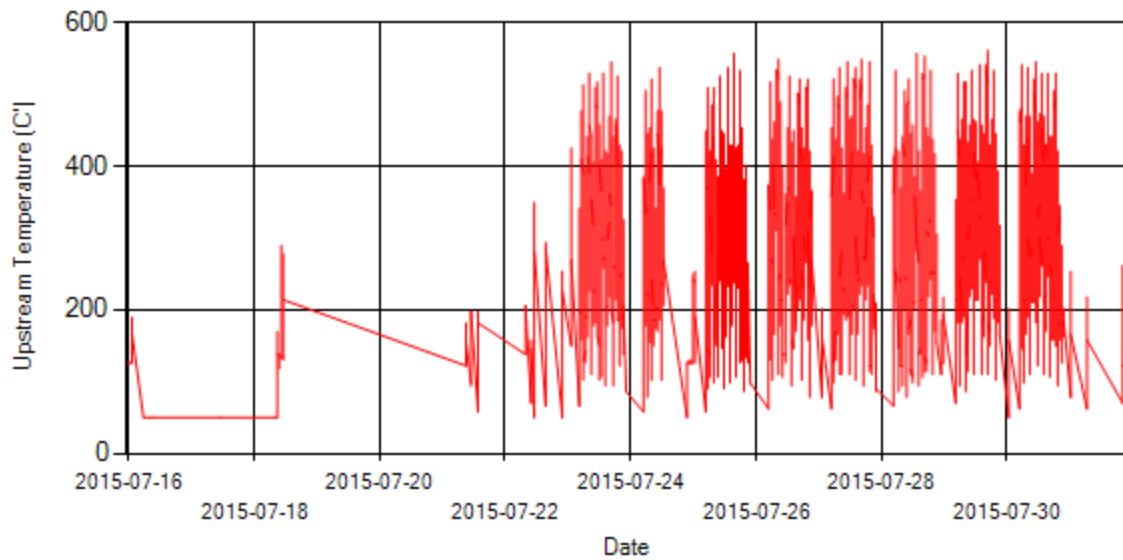


Figure 6- Temperature distribution over the period

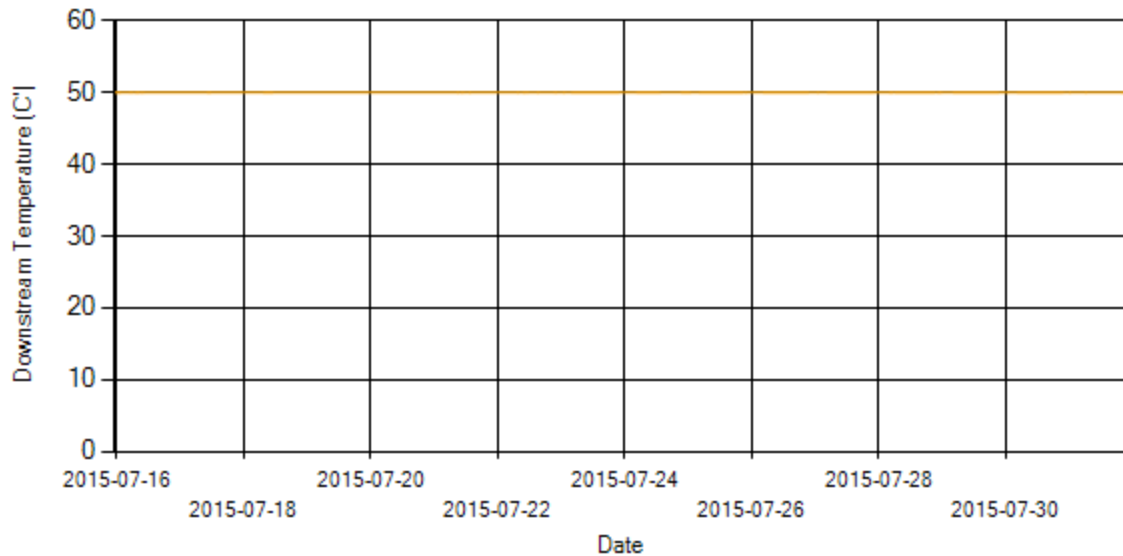


Figure 7- Temperature distribution over the period

Notice: Temp 2 sensor had problem during this period and showed constant 50 values.

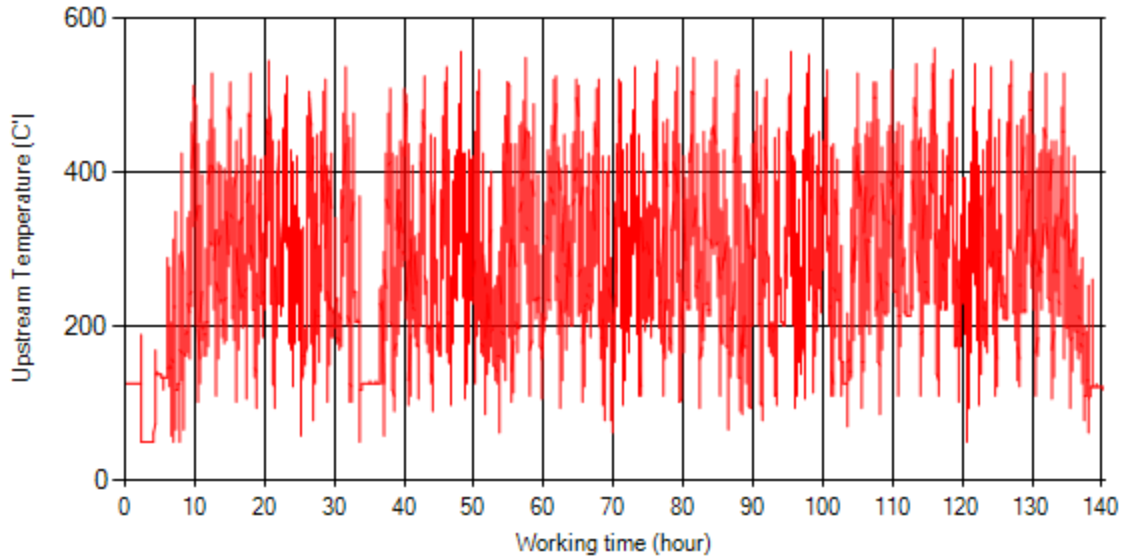


Figure 8- Temperature vs. working hours

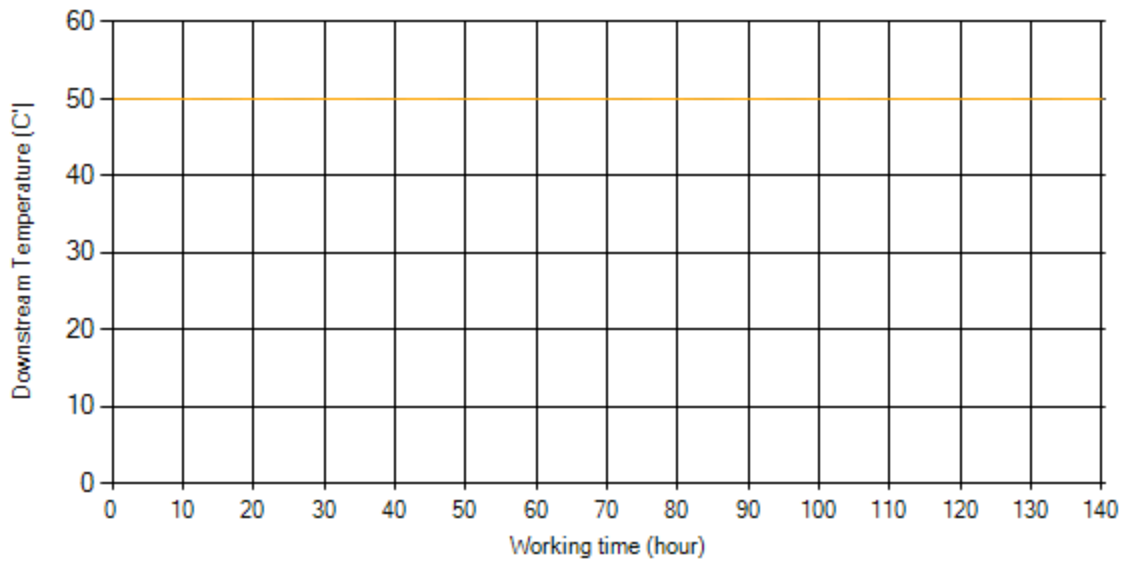


Figure 9- Temperature vs. working hours

Engine Speed Diagrams

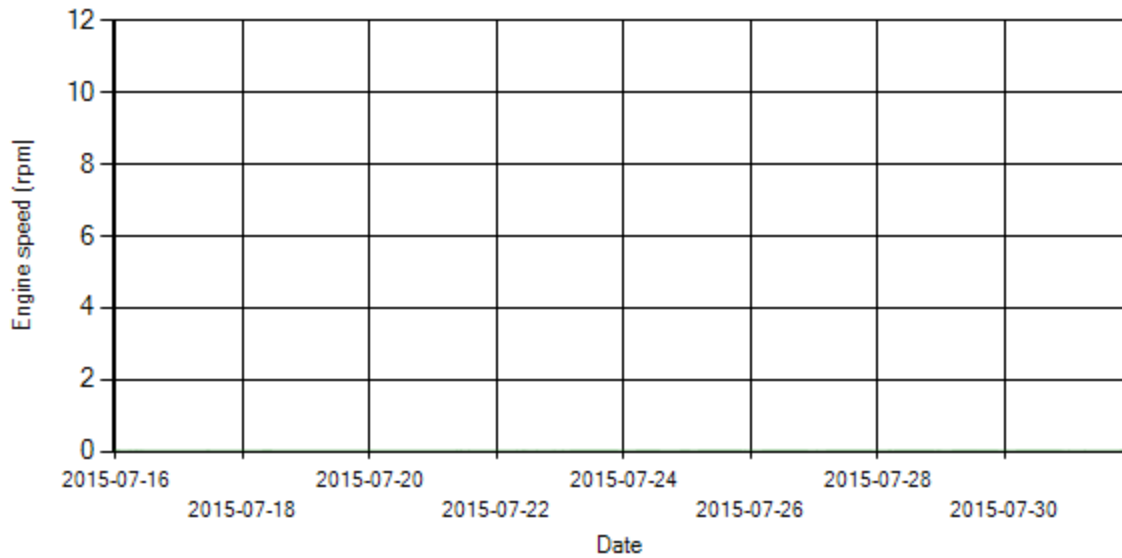


Figure 10- Engine speed distribution over the period

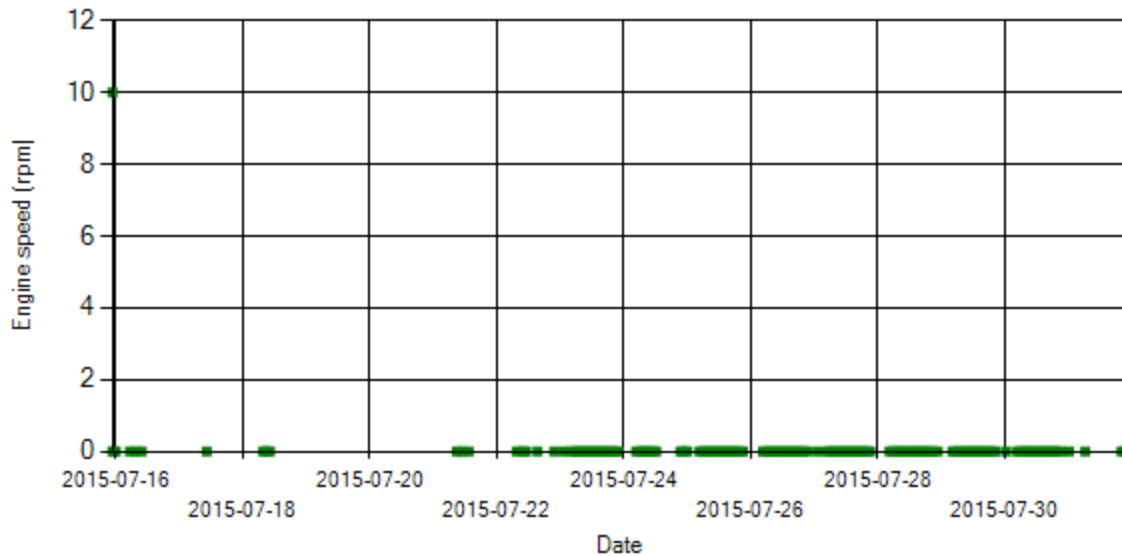


Figure 11- Engine speed diagram for calculating CPK's working days

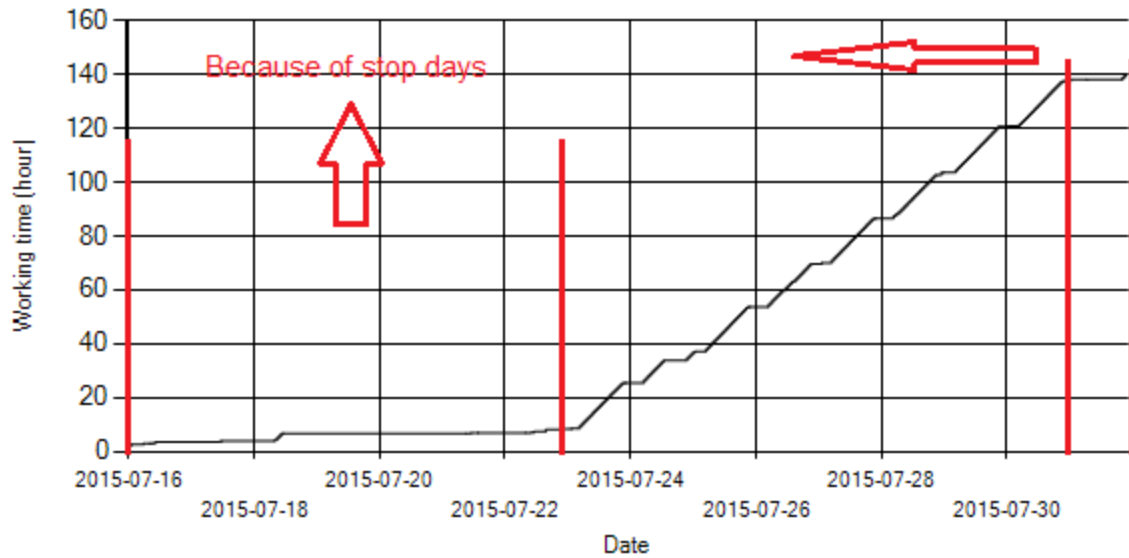


Figure 12- Time diagram for calculating CPK's working days

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, data logger didn't sample 8 days because of stop days.

Pressure-Engine Speed diagrams

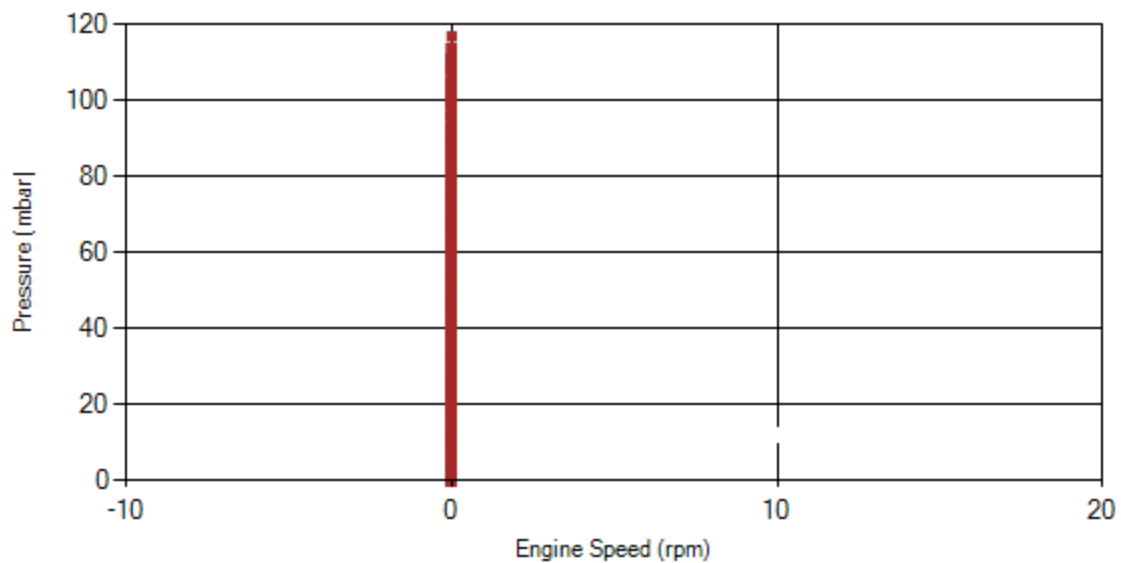


Figure 13- Pressure against engine speed

Notice: RPM sensor had problem during this period and showed zero values.

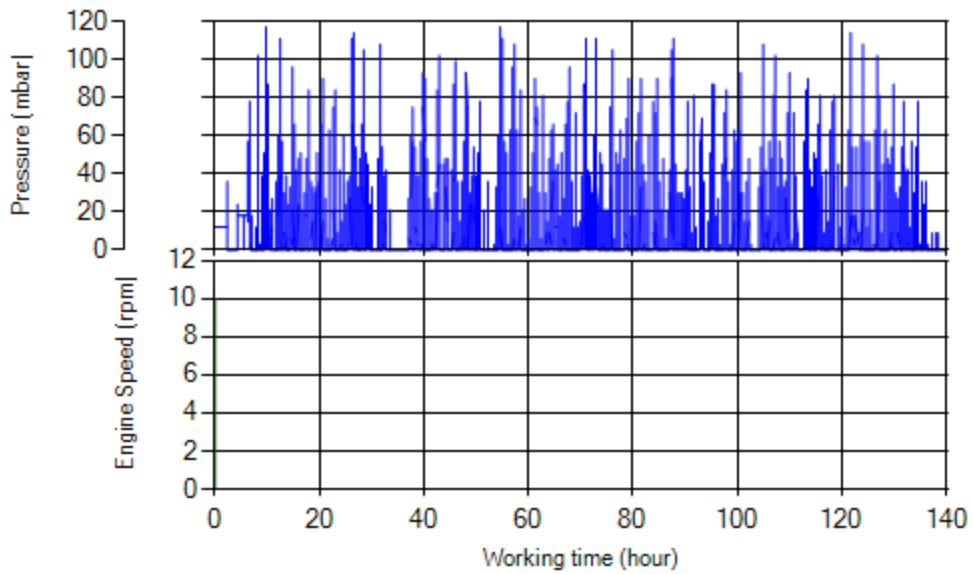


Figure 14- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

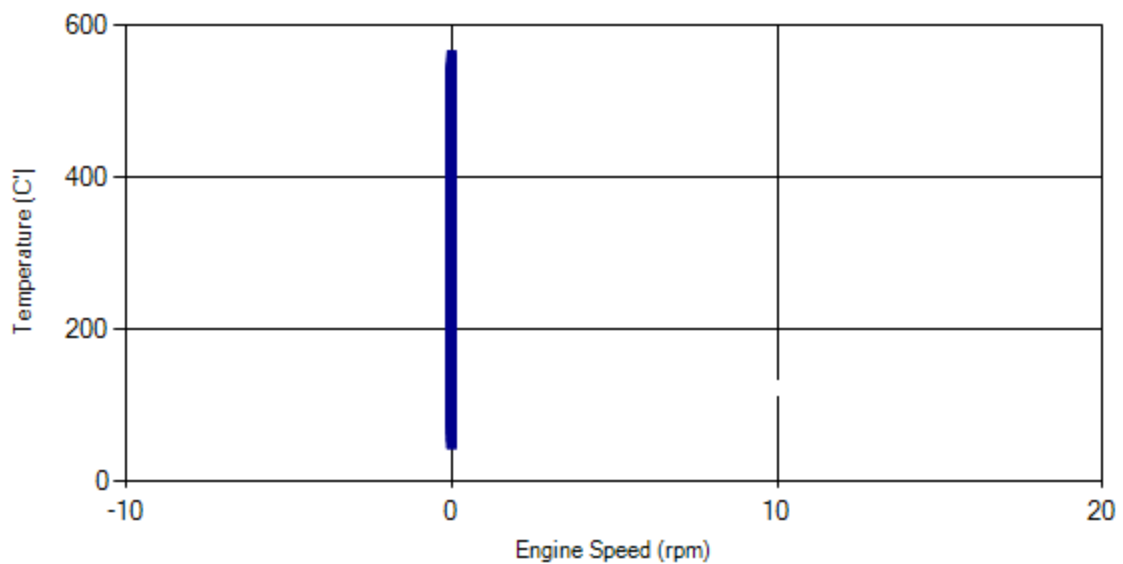


Figure 13- Temperature against engine speed

Notice: RPM sensor had problem during this period and showed zero values.

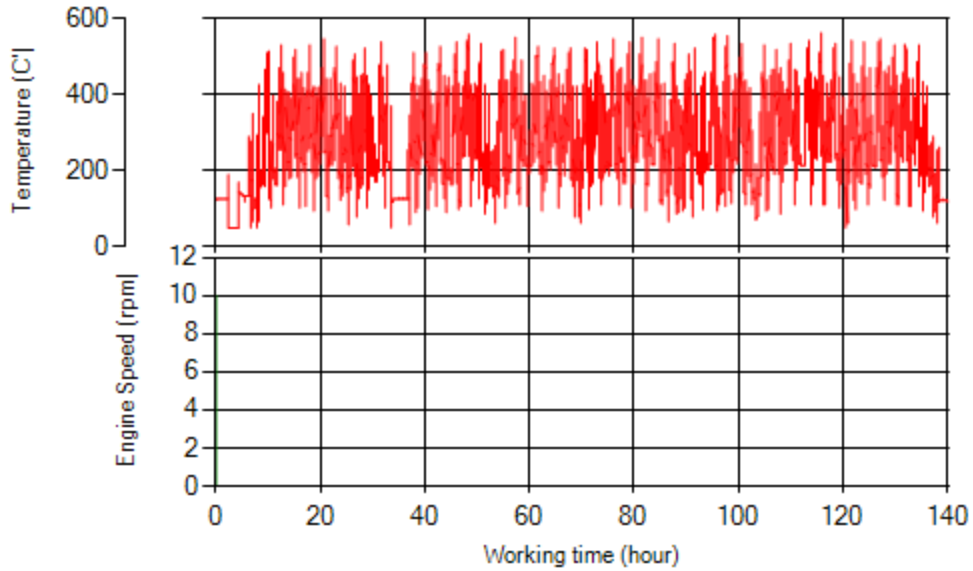


Figure 14- T, N distribution vs. working hours

Filter Operation Analysis

This system didn't have DPF during this period.

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