

## 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/Feb/2016 – 15/Feb/2016 (fifteen days)
K value - DPF upstream	2.00 [1/m]
K value – DPF downstream	0.04 [1/m]

*Table 2- DPF Maintenance History*

Filter maintenance date	DPF was cleaned on 22 <sup>nd</sup> Jul for the first time and on 15 <sup>th</sup> 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.

*Table 3- Fuel and Additive Consumption Information*

Bus mileage (from DPF installation date)	52751 km
Bus mileage over the period	2193 km
Working days over the period	1 day
Stop days	14 days
Data logger working days	14 days
Working hours over the period	215 hours 4 minutes
Average working hours per day (including stop days)	14 hours 20 minutes
Bus average speed	10.2 km/hr
idle speed time to all working time ration	64.22 %
Total Bus fuel consumption over the period	1315 lit
Fuel consumption per hour	6.12 lit/hr
Average fuel consumption	0.6 lit/km
Total Bus additive consumption over the period	0.65 lit
Average additive consumption	300 cc/km
Additive consumption to fuel ration	500 cc/1000lit

## Temperature, Pressure and Engine Speed Overview

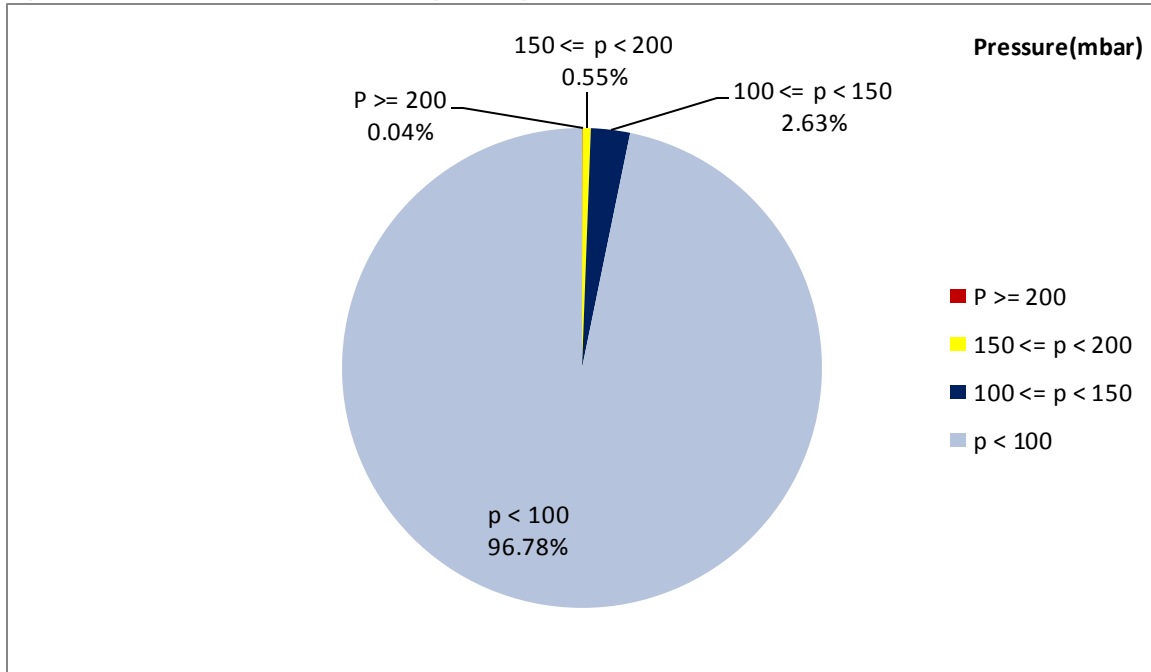


Figure 1- Pressure distribution over the working hours

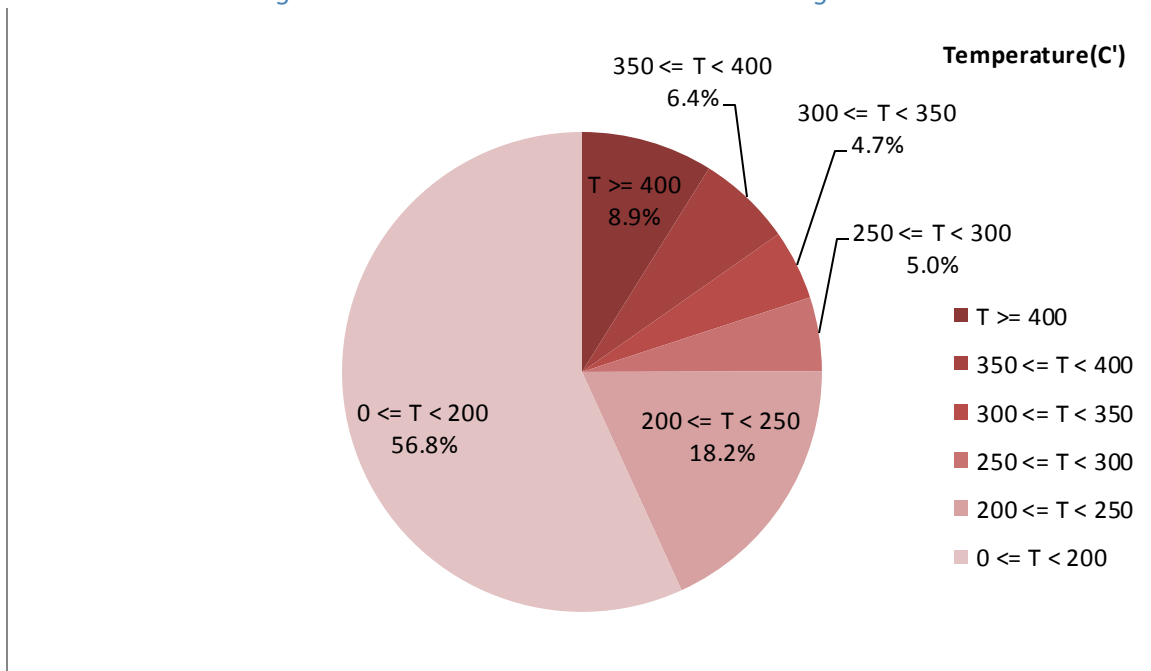


Figure 2-Temperature distribution over the working hours

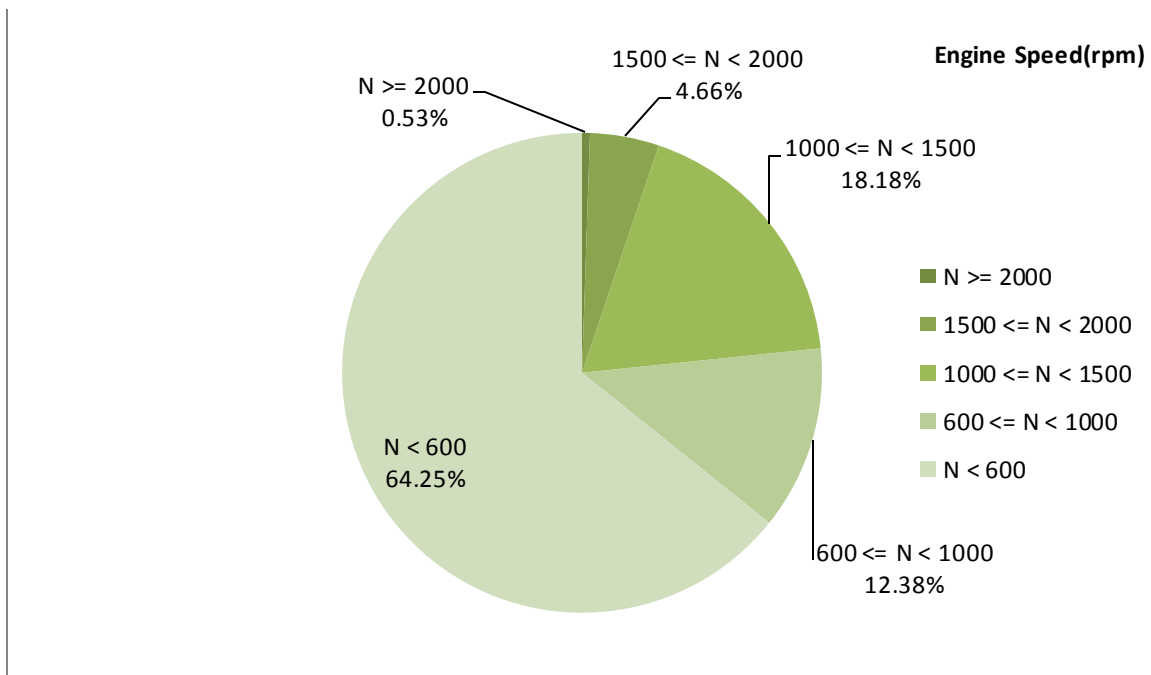


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
216.3	19.75	770

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
285.46	41.94	1144

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
602-50	228-0	2624-256

## Detailed Pressure Analysis

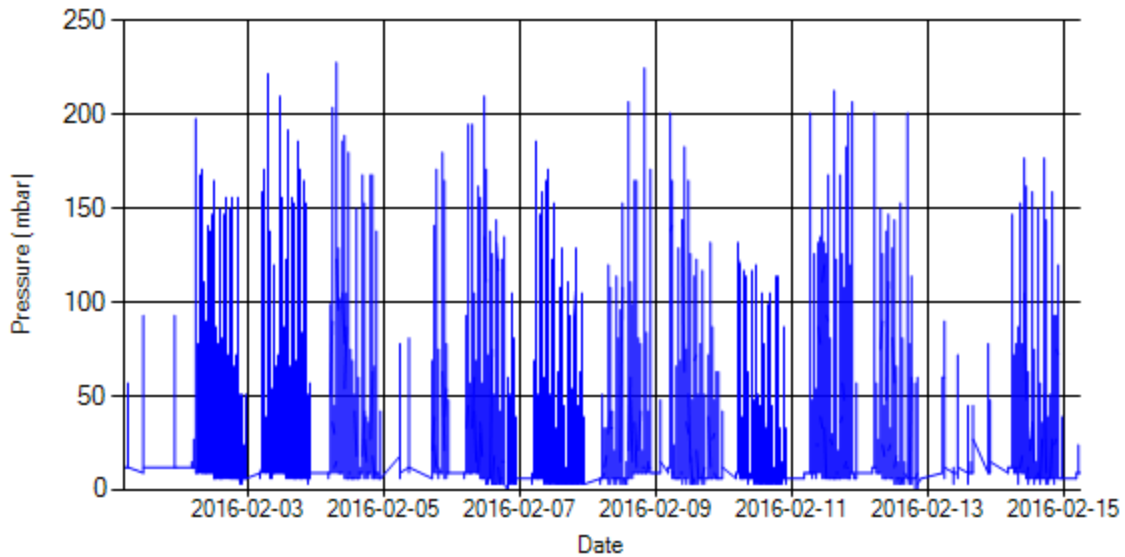


Figure 4- Pressure distribution over the period

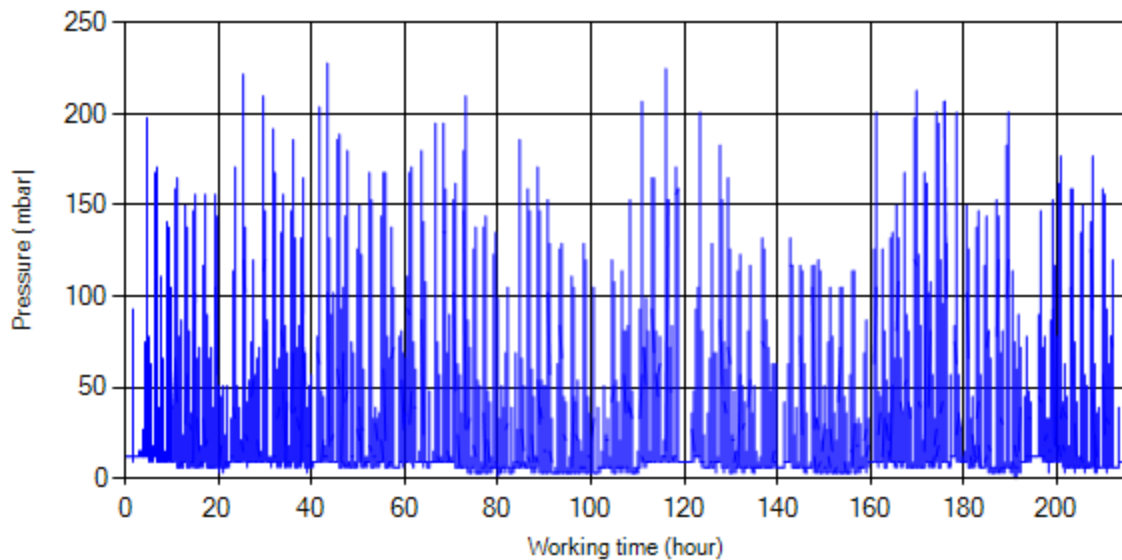


Figure 5- Pressure vs. working hours

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

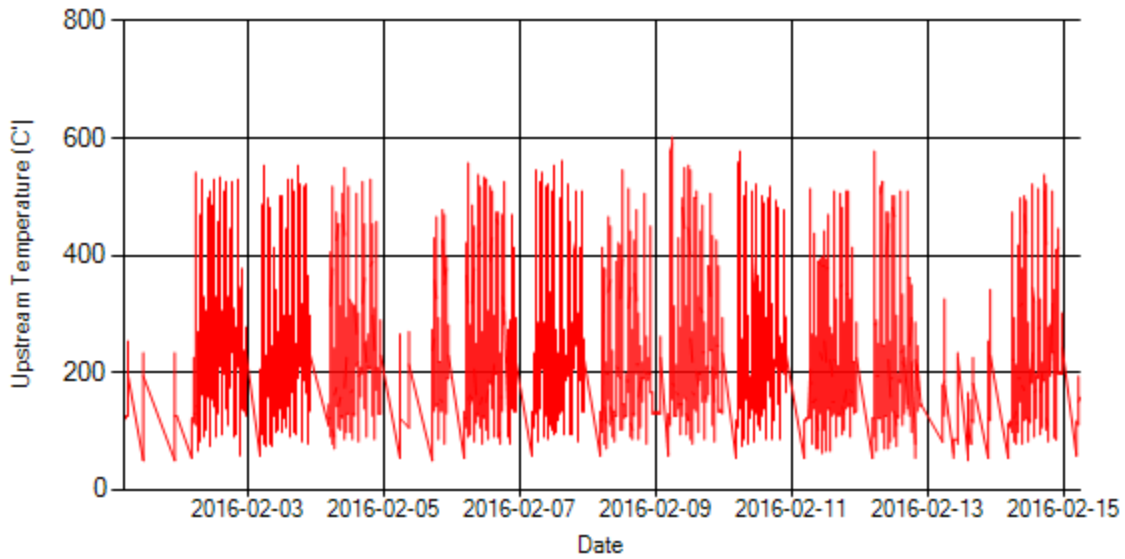


Figure 6- Temperature distribution over the period

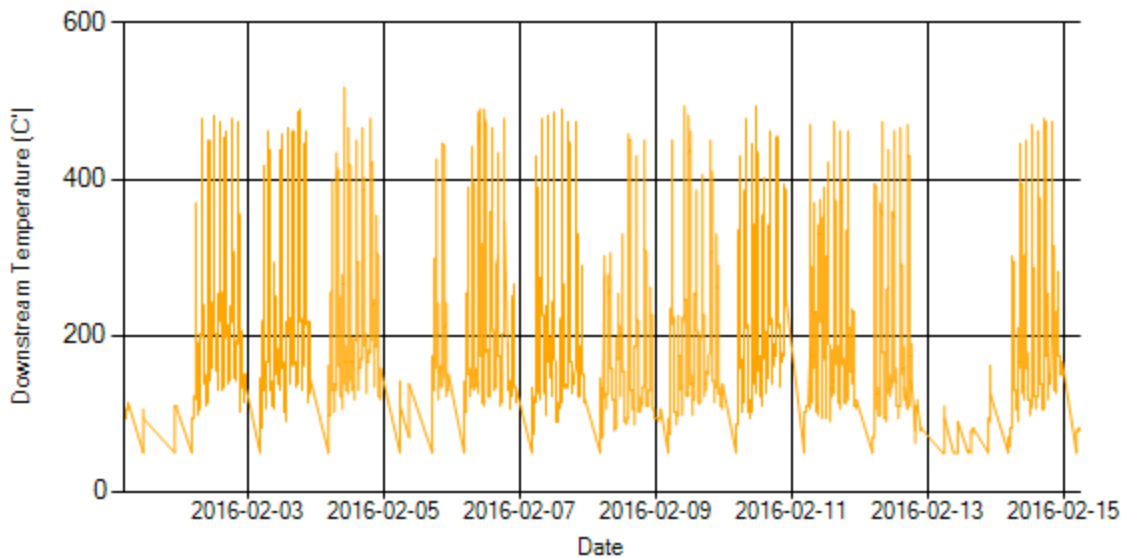
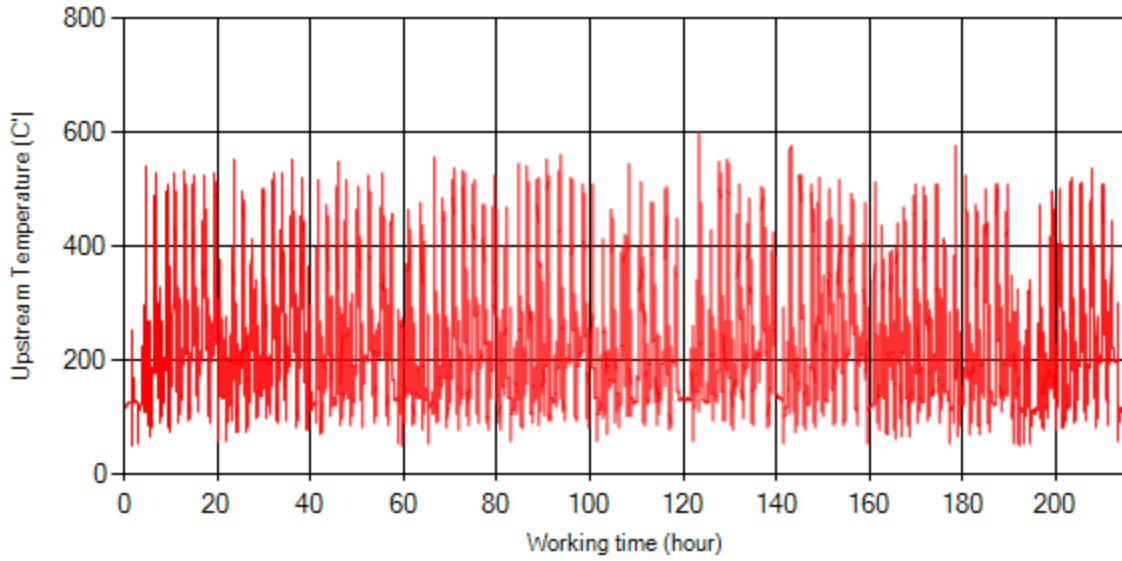
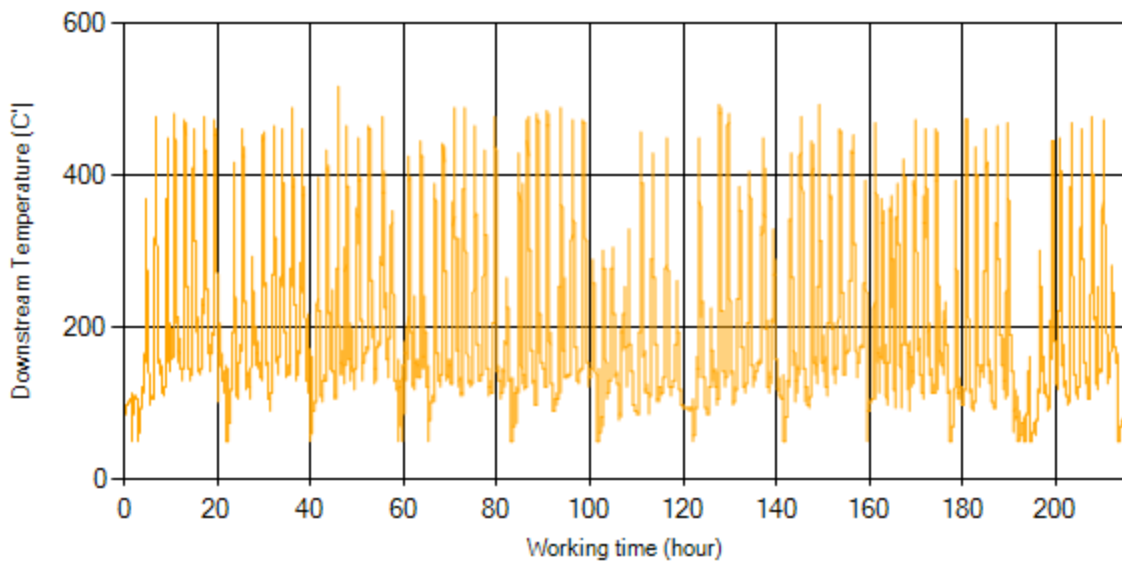


Figure 7- Temperature distribution over the period



*Figure 8- Temperature vs. working hours*



*Figure 9- Temperature vs. working hours*

## Engine Speed Diagrams

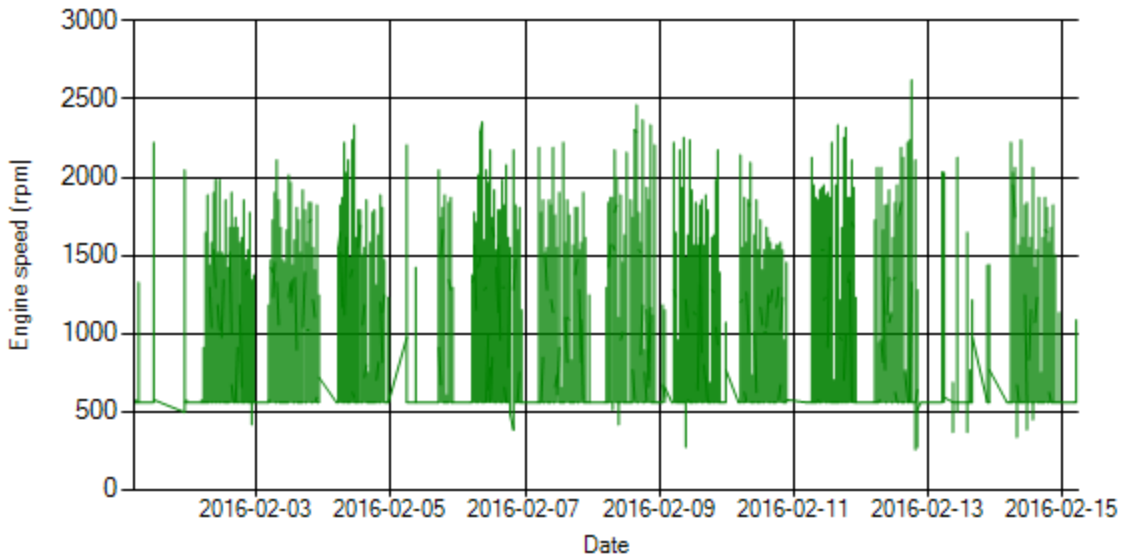


Figure 10- Engine speed distribution over the period

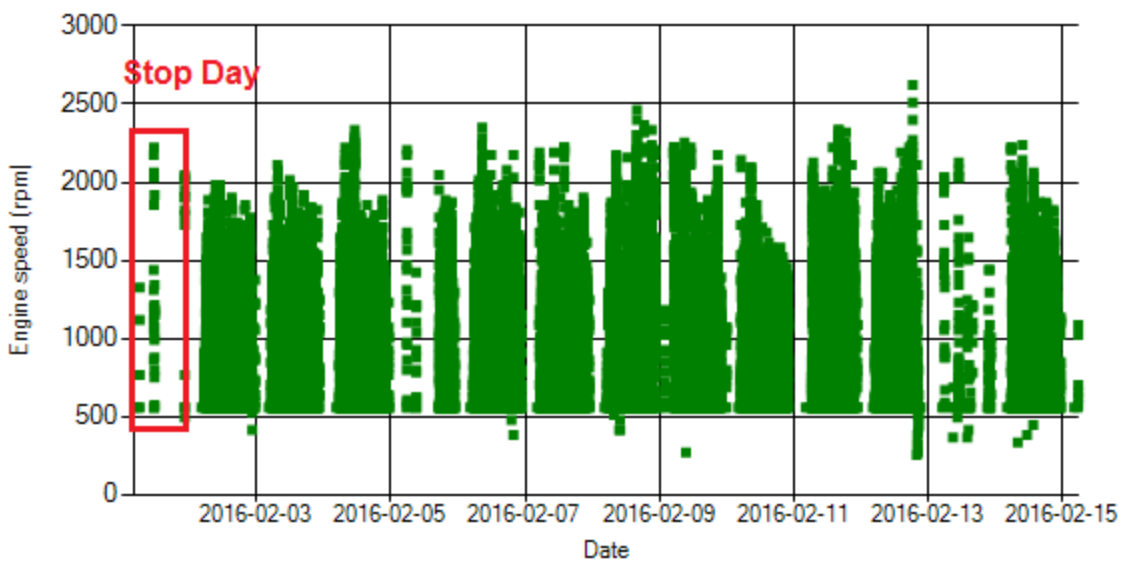


Figure 11- Engine speed diagram for calculating CPK's working days



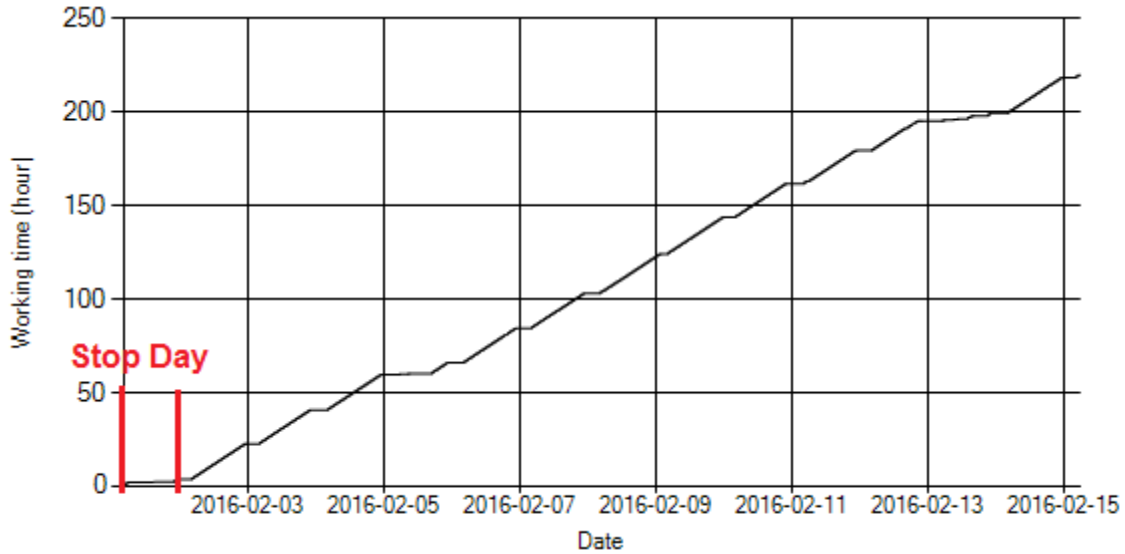


Figure 12- Time diagram for calculating CPK's working days

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, first of Feb bus was stationary.

### Pressure-Engine Speed diagrams

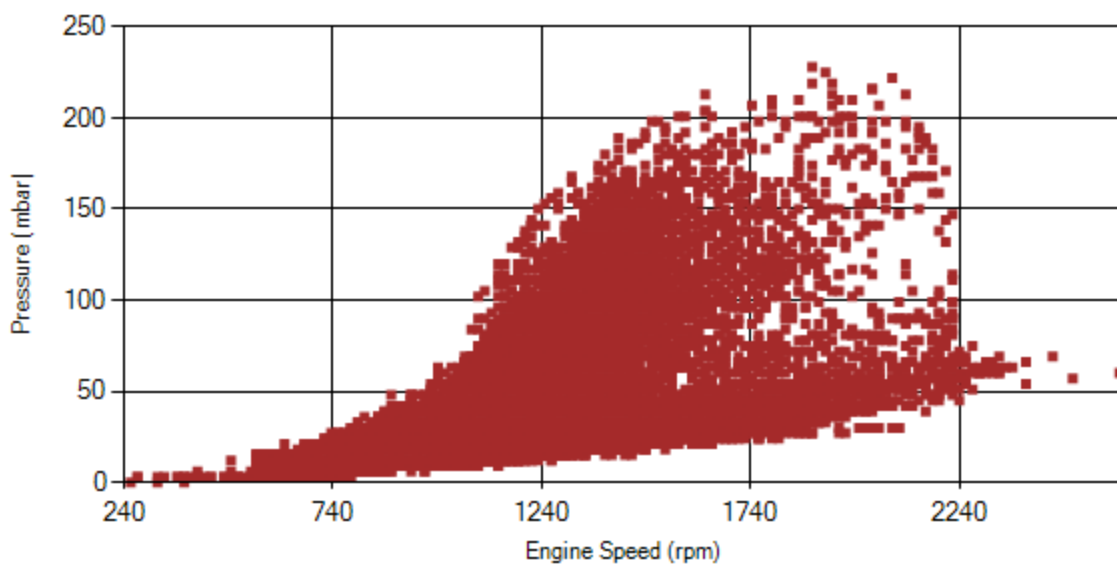


Figure 13- Pressure against engine speed

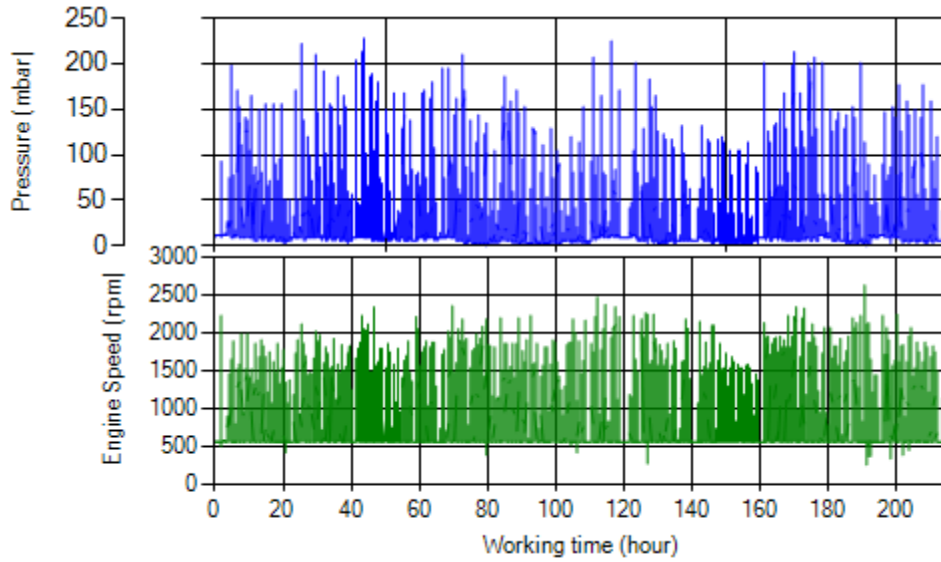


Figure 14- P, N distribution vs. working hours

### Temperature-Engine Speed diagrams

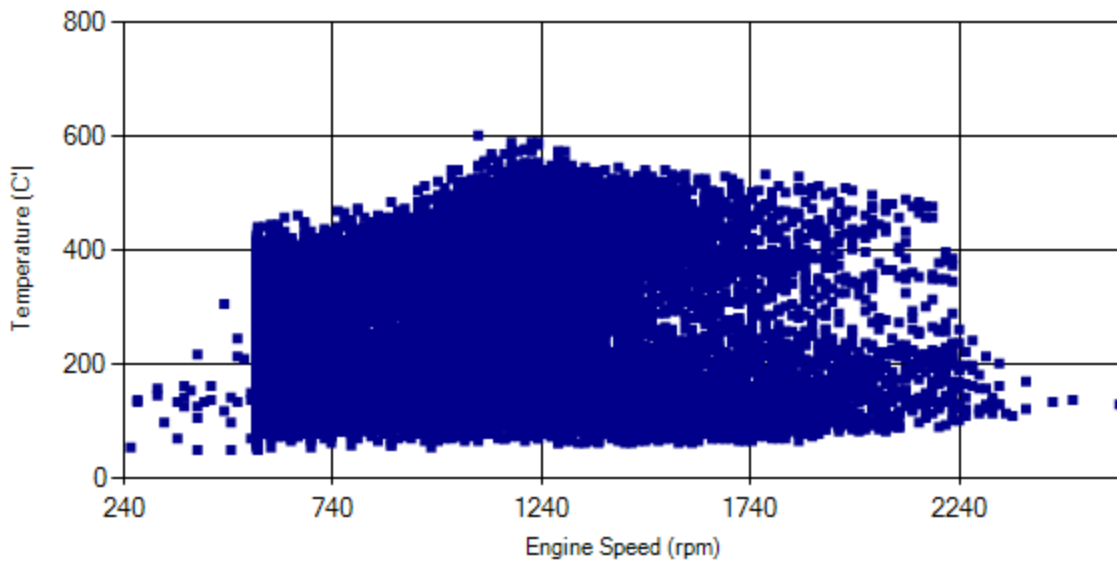


Figure 15- Temperature against engine speed

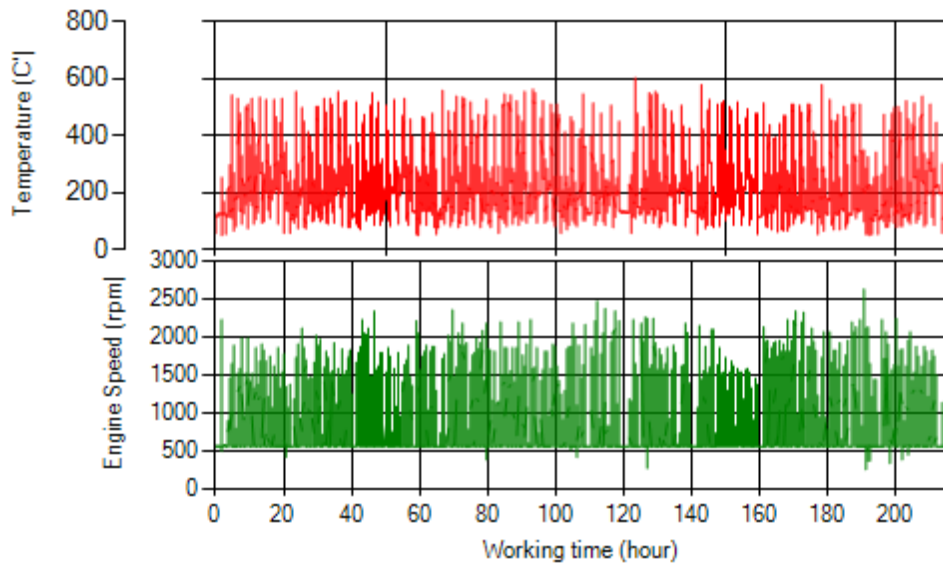


Figure 16- T, N distribution vs. working hours

### Filter Operation Analysis

- As depicted in figure 1, only 0.04% of working time pressure was above 200 mbar and 0.59% above 150 mbar.
- It can be obviously observed that 8.9% of total working-time temperature is above 400 °C and 15.3% above 350°C.

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