



REFERENCE	NI_2014_X98CUP_03
DATE	2014 July 3th
SUBJECT	Clio 4 Cup Softwares

**CONCERNED: ALL CAR**

Dear Competitors,

We inform you that **new** Clio 4 Cup softwares are now available on the following permanent PI COSWORTH FTP server:

Go to [ftp.pigroup.com](http://ftp.pigroup.com) or <ftp://clio4cup:yf12t83o@ftp.pigroup.com>

**User: clio4cup**

**Password: yf12t83o**

If these links don't work, enter the following URL in the address bar: <ftp://clio4cup:yf12t83o@ftp.pigroup.com>

The following screen appears:

## Directory listing

Parent Directory (Root Directory)

```
0 May 20 08:20 ./
0 May 20 08:20 ../
207401482 Apr 9 11:22 Toolbox 6.3.zip
22188605 May 20 08:20 Toolset 3.5.985.2.zip
```

Click on each link to download successively *PI TOOLSET 3.5* and *TOOLBOX 6.3*

We remind you that the "Softwares" User Manual is available on the Renault Sport Extranet (Chapter *G\_Softwares*) through the following link : <http://extranet-competition.renault-sport.com/>

- **What's new?**
  - **TOOLSET 3.5**

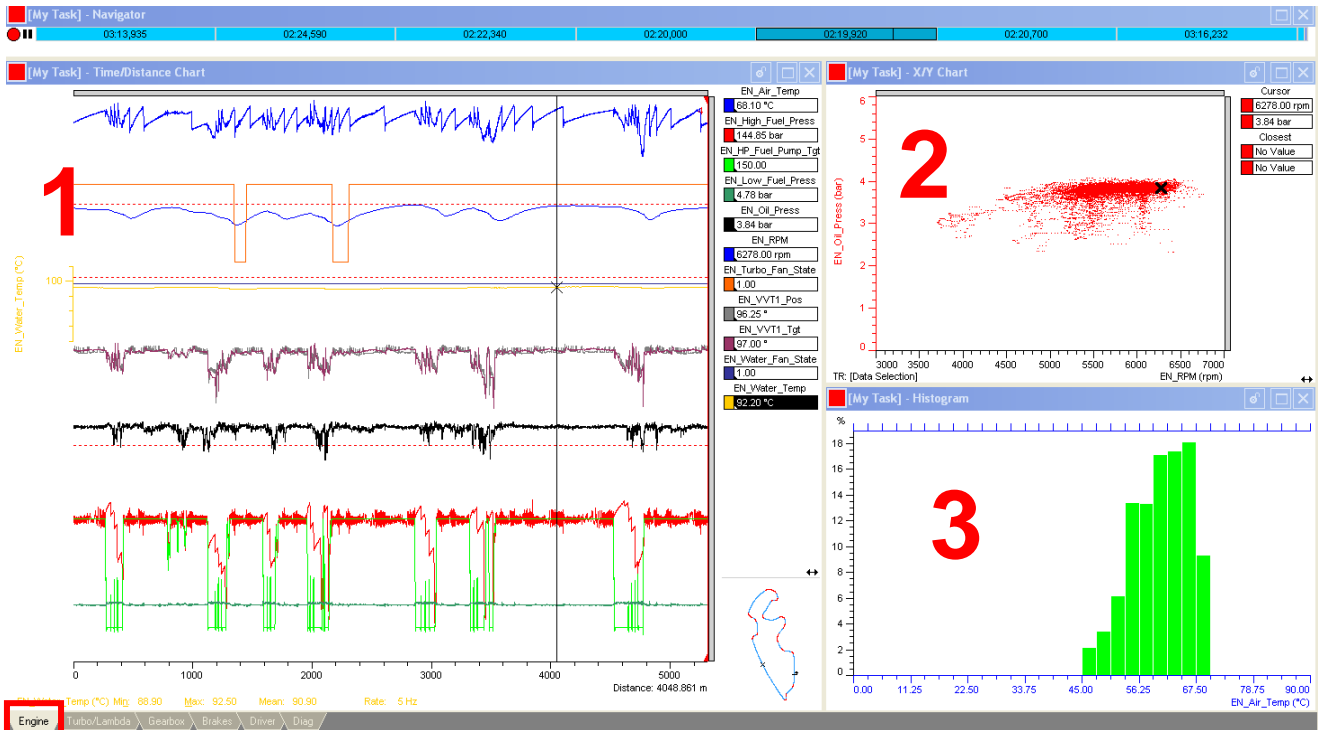
This new version of toolset eradicates crashes occurring during data offload process. There isn't new function inside.

- **TOOLBOX 6.3**

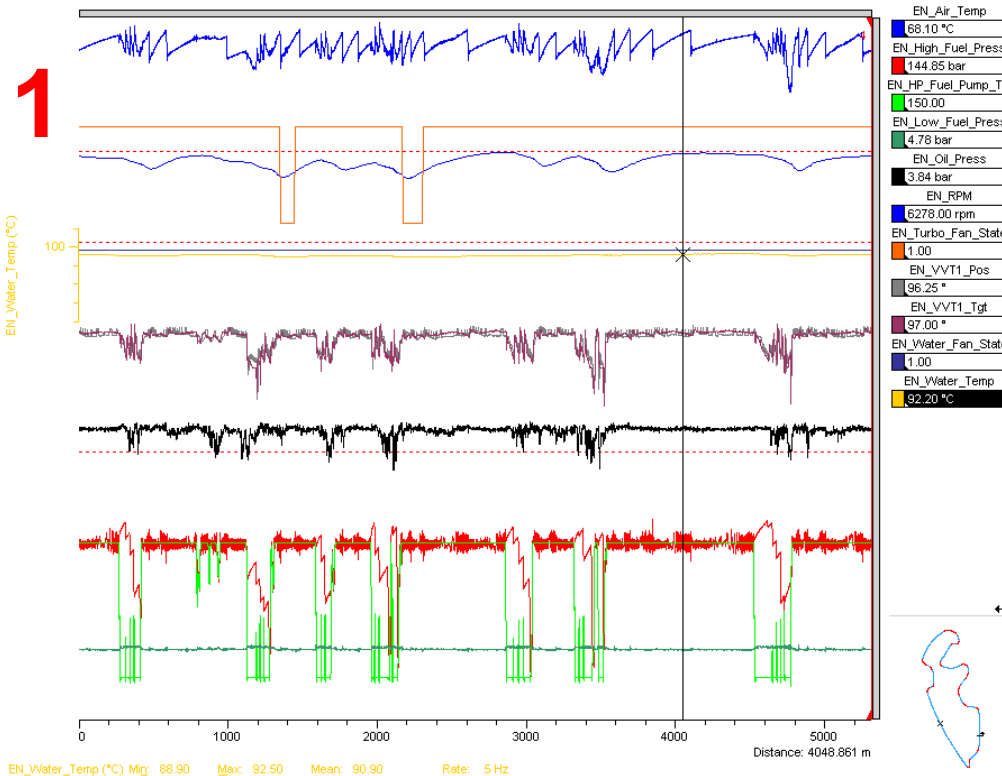
This new version allows you to work on 6 worksheets instead of 1. A workbook is available too to help you analyse datas. You can find this workbook on the extranet, called Clio\_CUP\_2014.pwb (4. Softwares)



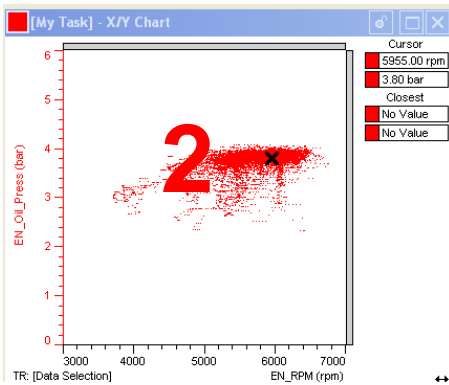
• **Engine :**



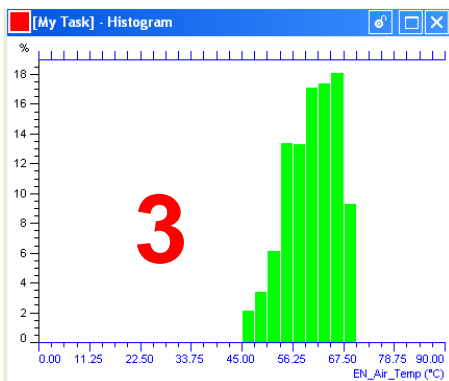
On the engine page, you will find 3 displays:



- **En\_Air\_Temp:** check if below than 70°C. If not check your water spray system.
- **En\_High\_Fuel\_Pressure** = **En\_HP\_Fuel\_Pump\_Tgt**
- **EN\_Low\_Fuel\_press :** has to be close to 5bars.
- **En\_Oil\_Press:** around 4bars when full throttle. Alarm @ 3 bars.
- **En\_RPM :** engine speed
- **En\_Turbo\_Fan\_State :**
  - 1 : turbo fan + water spray nozzle ON
  - 0 : turbo fan + water spray nozzle OFF
- **EN\_VVT1\_POS** must follow **EN\_VVT1\_Tgt**
- **EN\_Water\_Fan\_State** 1=ON 0=OFF



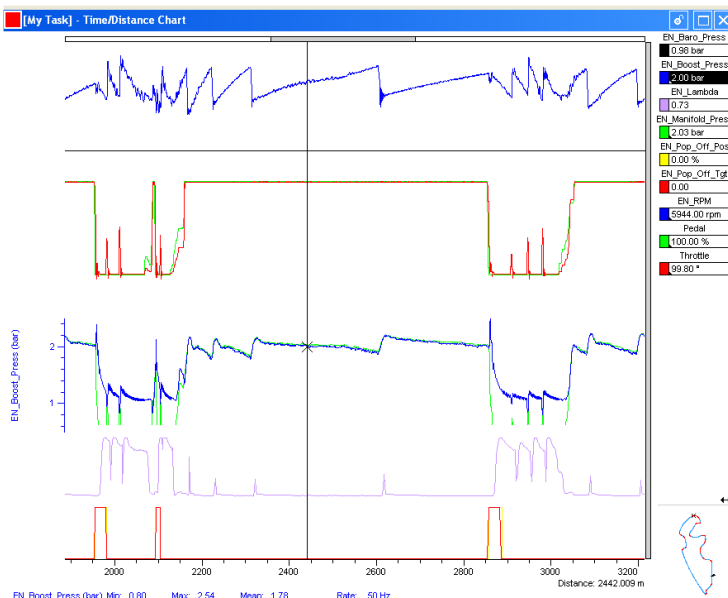
- Allows you to follow the Oil Pressure. Be sure that your level is correct all the time during the meeting, as the oil level is regulated. Please refer to the 2014 Nomenclature / 10.50



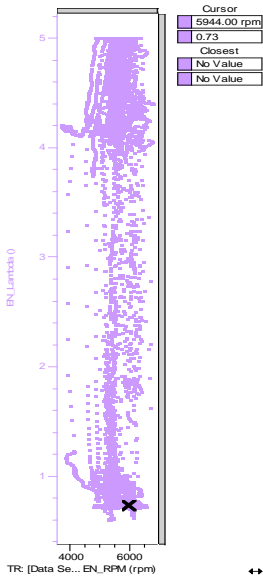
- Allows you to follow air intake temperature.
  - o From 0 to 40°C => Blue
  - o From 40°C to 70°C => Green
  - o Upper than 70°C => Red

When the EN\_Air\_Temp is upper than 70°C; ECU corrections appear, and so performance decreases slightly.

• TURBO/LAMBDA :

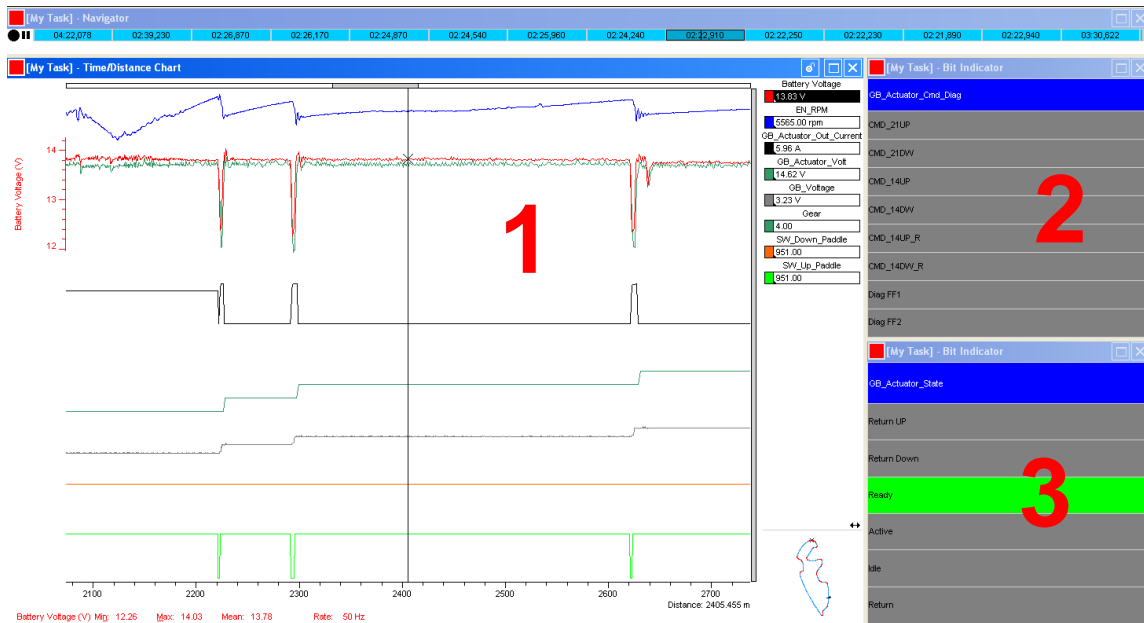


- **En\_Baro\_Press**: Value learnt while engine is cranking. Stays the same during all the run.
- **En\_Boost\_Press** = **En\_Manifold\_Press** when throttle is @ 100%
- **En\_Lambda** : Value of the Lambda signal
- **En\_Pop\_Off\_Pos** must follow **En\_Pop\_Off\_Tgt**
- **En\_RPM** : engine speed
- **Pedal** : Throttle Pedal Position
- **Throttle** : Engine Throttle Body Position

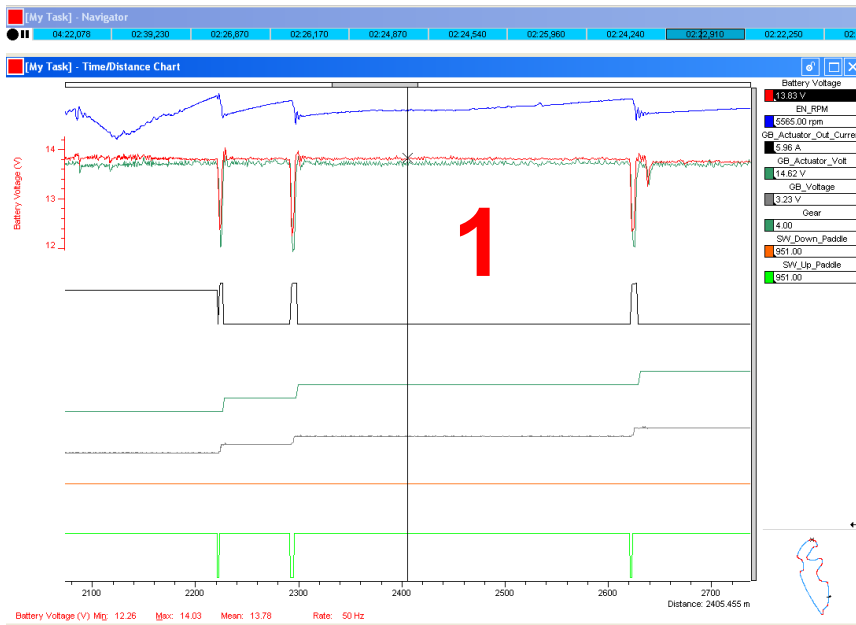


- This scatter plot of EN\_Lambda vs En\_Rpm allows you to control the proper operation of the lambda.
- You have to control that all the area between 0 and 5 is filled by point. If only one area is filled, you have to check the Lambda connection, and if appropriate, change the Lambda sensor

• **GEARBOX:**

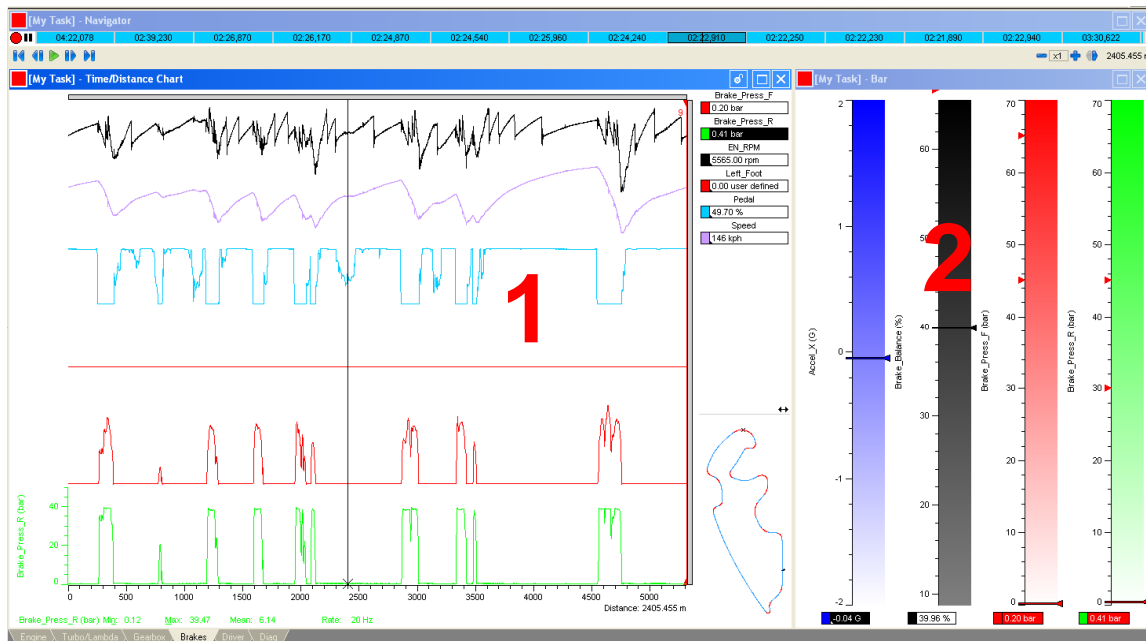


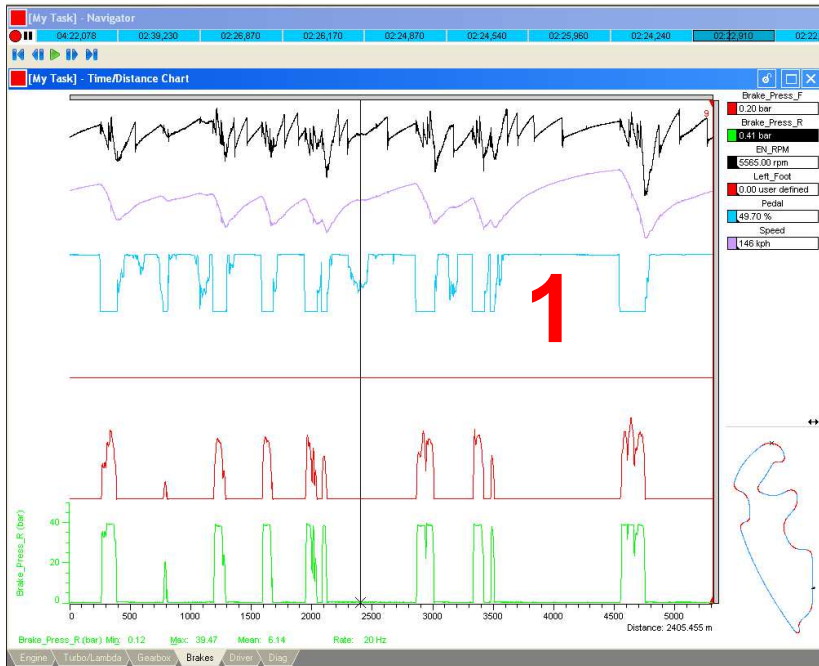
- 2 & 3 are Bit indicators. So when they switch to Green it means the corresponding outing/action is ON.



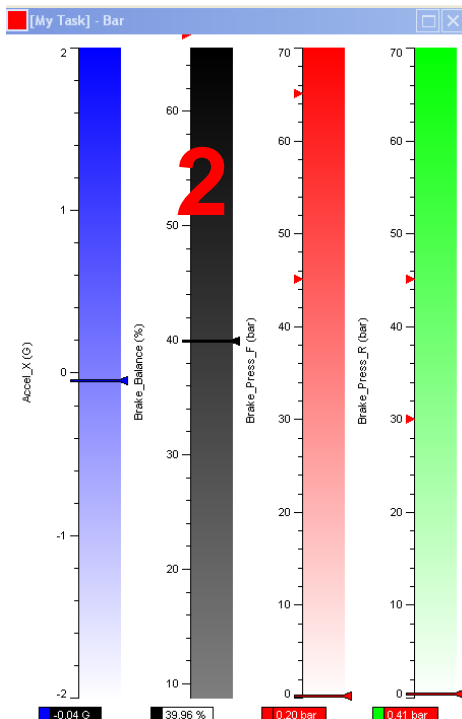
- **GB\_Actuator\_Out\_Current:** XAP Gearbox actuator output current
- **GB\_Actuator\_Volt:** XAP gearbox actuator output voltage
- **GB\_Voltage:** Gearbox barrel potentiometer voltage. You have to control that your barrel potentiometer is properly set. See *User Manual / D – Transmissions / page 17*
- **Gear:** Gear ratio engaged. Derived from GB\_Voltage channel
- **SW\_Down\_Paddle:** Down paddle pulled (951=>not pulled ; 49=>pulled)
- **SW\_Up\_Paddle:** Up paddle pulled (951=>not pulled ; 49=>pulled)

• **BRAKES:**





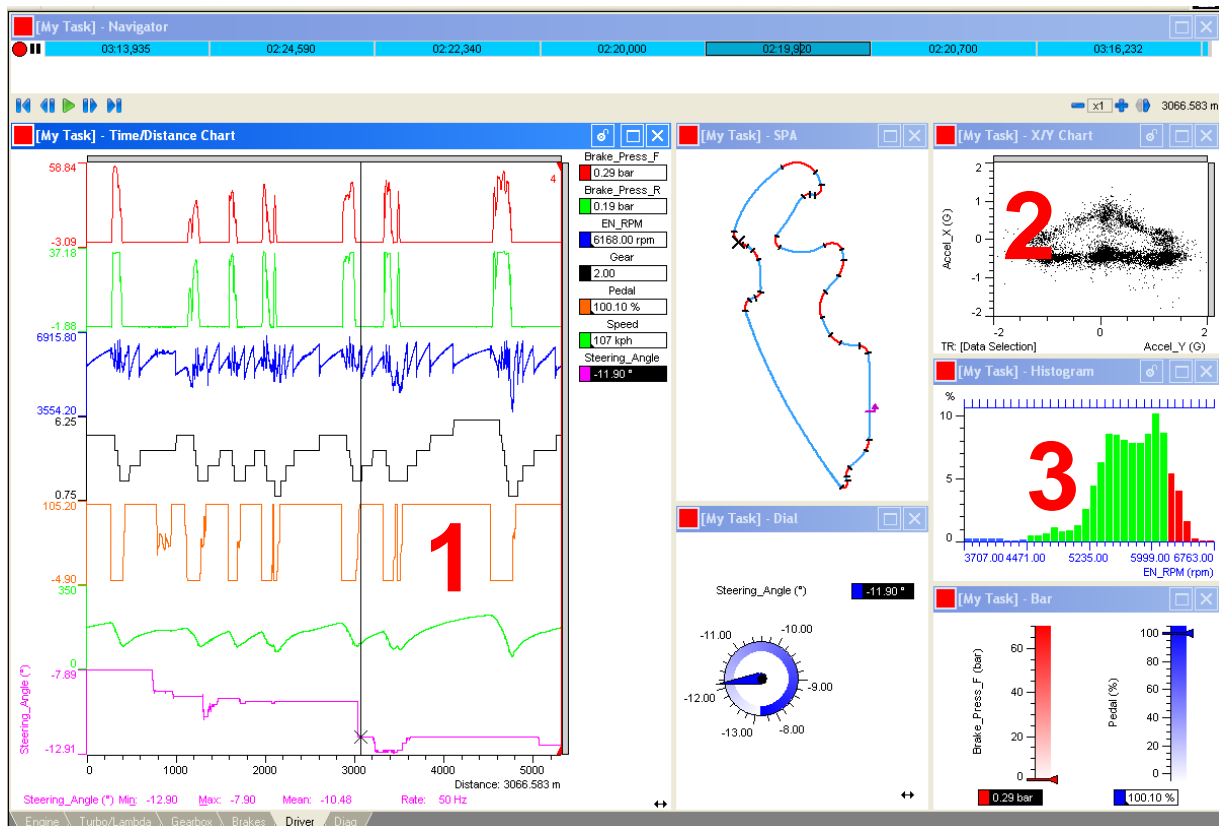
- **Brake\_Press\_F**: to achieve correct brake efficiency, you have to achieve more than 45bars.
- **Brake\_Press\_R**: to achieve correct brake efficiency, you have to place your brake limiter between above 30bars.
- **Left Foot** : Allows you to see if the driver do left foot braking, **not recommended** on Clio IV CUP



This simple bargraph may help to compare brake efficiency between 2 or more drivers, using the following parameters :

- **Brake\_Press\_F (bars)**
- **Brake\_Press\_R (bars)**
- **Brake\_Balance (%)**
- **Accel\_X (G) : Deceleration / Acceleration**

• **DRIVER:**



This worksheet may help you to analyze driver behaviour. You will find 6 graphics:

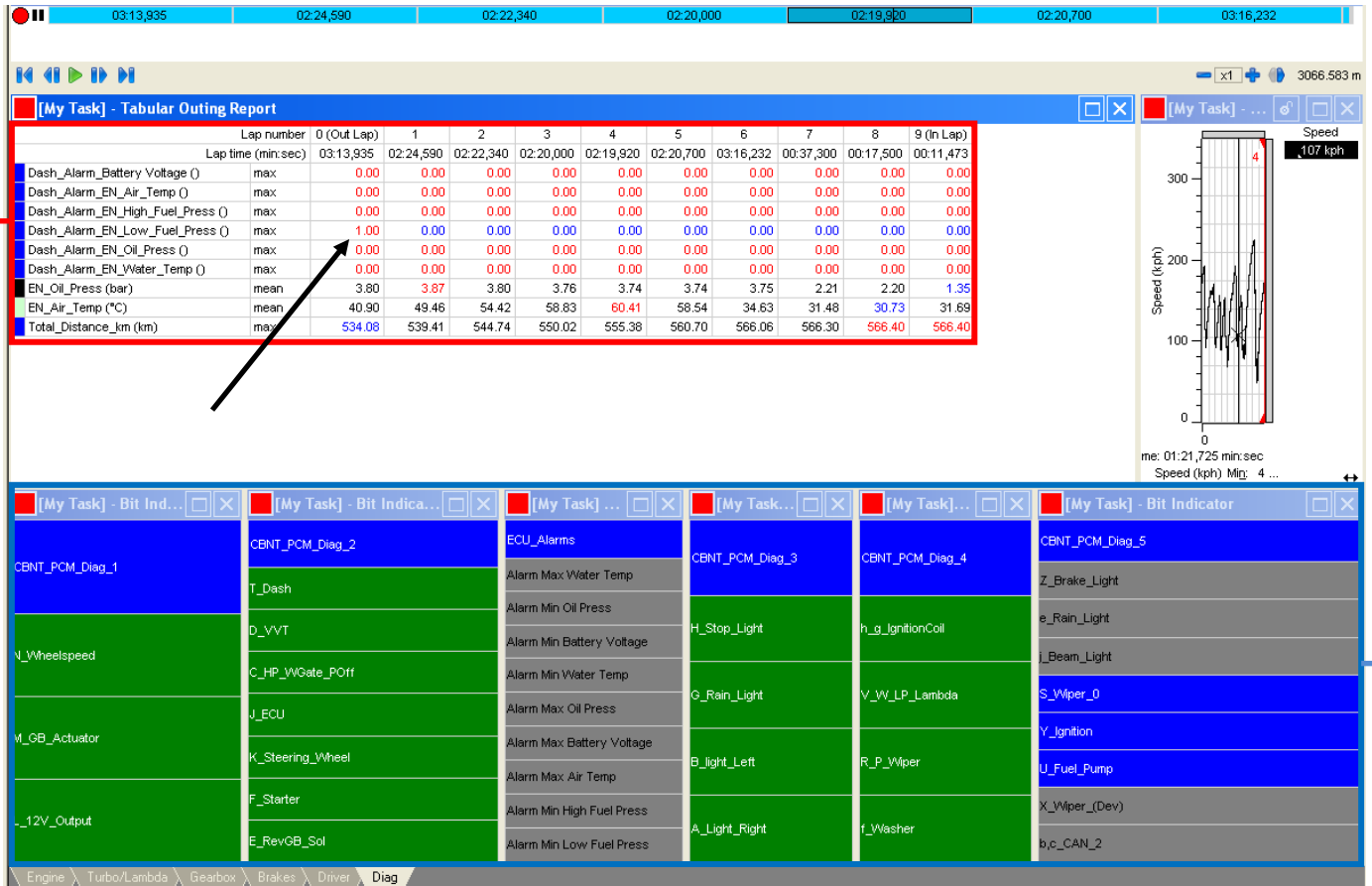
1. Time/Distance chart:
  - a. Brake Pressure front & rear
  - b. Engine Speed
  - c. Gear
  - d. Car speed
  - e. Steering angle
2. G-G force diagram (lateral & longitudinal acceleration/deceleration)
3. Engine use: Allow you to see how the driver uses the engine. We basically define (revs/min) the graphic with following color:

Color	>=	<
	6200	
	4500	6200
		4500

4. Track map.
5. Steering position (angle in °)
6. Brake\_Press vs Throttle Pedal Position

• **Diag:**

On this page we have placed all parameters allowing you to understand when and why a problem appears.



- All diag bit indicators are on this page:
- CBNT diag 1
  - CBNT diag 2
  - CBNT PCM diag 3
  - CBNT PCM diag 4
  - CBNT PCM diag 5
  - ECU Alarm

When you face an alarm on the Dashboard (Letter + Led), Dash\_Alarm\_X changes to 1 (ie. black arrow above). So you can easily check on which lap the problem appears.

This report allows you to have a quick overview of the Max/Min/Average value you want to follow. Basically, we place the average of En\_Oil\_Press & En\_Air\_Temp.