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Getting to know the Valencia Street Circuit

Speak to the majority of Fl fans about the Valencia street circuit, and you will hear a groan. It's a snorefest, a parade, and it all looks the same.

While it shares a harbour view and a lack of overtaking with Monaco, Valencia is hardly the jewel in Formula l's crown. Let's be frank – it's not even the cubic zirconia in Formula l's crown.

But all that could change under the 20ll regulations. We've seen overtaking in Monaco, and absolute madness at the tracks that have always allowed for passing manoeuvres. With any luck, Valencia will come alive thanks to the combination of Pirelli rubber and double-DRS zones.

With 25 numbered corners, the Valencia street circuit has more turns than any other track on the calendar. But it's not all about getting the highest levels of downforce, thanks to the longish straights. In set-up, teams need to balance the need for a lot of wing with the lack of drag necessary for the high average speeds on track.

"Valencia is a really long and technical lap where you need to have good balance in order to perform at your best," HRT driver Tonio Liuzzi said.
"From the driver's point of view, the most difficult thing is braking and turning and finding a way to overtake. It will be a really hard race for the tyres as well, especially the rears, as they are under quite a lot of pressure at slow speeds because of the high traction demands. It will be difficult not to overheat the rears, given the nature of the surface combined with the track temperature."

As a street circuit, teams also need to take the variable levels of grip into account. Thanks to the Mediterranean climate, rain is unlikely in Valencia – there's a zero percent chance of rain this weekend – so the track rubbers in constantly, improving day by day. According to Mercedes, "Valencia 'rubbered in' more than any other circuit except Korea in 2010: the difference between the fastest time in Pl and the pole time in qualifying was 3.588s, demonstrating the development of grip at the circuit."

Another factor affecting tyres and grip will be the high track temperatures predicted for the weekend. While Pirelli have opted not to bring their supersoft compound, drivers will need to nurse their tyres to get optimum performance in the heat.

"Tyre wear on [the Valencia] circuit is likely to be quite high because of the track layout, the nature of the surface, and also the weather conditions, which should be very warm," Pirelli motorsport director Paul Hembery explained.

"For all these reasons, we've selected the medium and soft tyres, which should provide the teams with a good level of resistance, plenty of different opportunities for strategy and about a second per lap difference between the compounds. The PZero White tyres have been adjusted slightly from our original specification to make them a bit more durable, along the lines of the tweak we made to the PZero Silver hard tyre in Spain, and this was the compound that the teams tested during Friday's free practice in Canada, giving us plenty of useful data."

The combination of slow corners and fast straights means that the Valencia street circuit is seen as a 'stop-go' race, making braking stability key. Gearboxes are also vital here, with an estimated 64 gear changes per lap – the highest of the season thus far.

"The Valencia Street Circuit requires 64 gear changes per lap; only Singapore requires more, with 7l changes per lap," Mercedes explained in a pre-race report. "This equates to over 3,648 changes per race, compared to a season average of 3100 gear changes. This means, on average, the drivers are changing gear once every 85 metres, compared to once every 6l metres in Monaco, or at the other extreme, once every 143 metres in Spa."

As for engine wear, 69 percent of the lap is run at full throttle, putting the Valencia street circuit on a par with Albert Park, Istanbul Park, and Silverstone.

Cosworth say that "the characteristics of the Valencia street circuit are in stark contrast to Formula I's other fully-fledged street tracks at Monaco and Singapore with much higher average and top speeds, which place notable demands on power units. The track has the highest number of corners of any track on the calendar – 25 in total – with nine relatively slow corners which have similar apex speeds, putting a real emphasis on low-speed driveability."

One thing that will almost certainly shake up the action this weekend is the FIA's new instructions on qualifying engine mapping. According to a report in Autosport, FIA technical delegate Charlie Whiting has written to the teams explaining that qualifying-specific engine maps will be verboten from here on out

Whereas before teams could change their engine mapping settings between qualifying and the race, Whiting has now said that such tweaks will be forbidden. Some teams were in the habit of using extreme settings in qualifying to generate added downforce, and then dialling back to a setting more likely to last for the length of a race.

Now that such changes have been banned, it will be interesting to see which teams are affected, and to what extent. Ahead of Silverstone's off-throttle blown diffuser ban, the engine-mapping ban could lead to the first serious shake-up of the season.

The current configuration of the Valencia street circuit has been in use since the race's inception in 2009, and measures 5.419 km. Presuming it runs the current configuration of the Valencia street circuit has been in use since the race's inception in 2009, and measures 5.419 km. Presuming it runs the current configuration of the Valencia street circuit has been in use since the race's inception in 2009, and measures 5.419 km. Presuming it runs the current configuration of the Valencia street circuit has been in use since the race's inception in 2009, and measures 5.419 km. Presuming it runs the current configuration of the Valencia street circuit has been in use since the race's inception in 2009, and measures 5.419 km. Presuming it runs the current circuit has been in use since the race's inception in 2009, and measures 5.419 km. Presuming it runs the current circuit has been in the current circuit has been circuit

for the full distance, the 2011 European Grand Prix will last for 57 laps, bringing the total distance run to 308.883 kilometres.

For those of you in a hurry, Team Lotus has provided a handy thumbnail sketch of the circuit's characteristics:

- · "Longitudinal 'stop and go' track
- "Many hard braking & traction areas
- "Very smooth track surface with no bumps and kerbs are not an issue
- "Run very low ride height but plank wear is high due to kerb usage
- "Possible high impact load on steering column when driver use kerbs through the TI8 T24 high-speed section
- "Overtaking is difficult and hard on brake temperature & wear
- "Overall grip gradually increases over weekend as the circuit is used infrequently"

With only three races under its belt, it will not surprise to learn that not many people have won the race, claimed pole, or set the fastest lap.

All past Valencia winners are still racing in Fl: Sebastian Vettel (2010), Rubens Barrichello (2009), and Felipe Massa (2008). Same applies to pole sitters: Sebastian Vettel (2010), Lewis Hamilton (2009), Felipe Massa (2008). Fastest laps have been secured by Jenson Button (2010), Timo Glock (2009), and Felipe Massa (2008), making the Brazilian driver the only man to have scored a Valencia hat trick.

The current lap record at the Valencia street circuit is Timo Glock's 2009 time of 1.38.638s, set at an average speed of 197.688kph.

Fl Valencia Blog - Thursday press conference in Valencia

It might have been the Thursday drivers' press conference in Valencia, starring Jaime Alguersuari (Toro Rosso), Fernando Alonso (Ferrari), Kamui Kobayashi (Sauber), Tonio Liuzzi (HRT), and Mark Webber (RedBull), but it was the Mark and Fernando show.

You have to feel a bit sorry for Kobayashi, Liuzzi, and Alguersuari, who were only asked stock questions about their expectations for the weekend, and not anything of any real interest.

Alonso and Webber, on the other hand, were asked about life, the universe, and transcendental meditation. Okay, maybe not...

First up, Webber is not unduly concerned about the forthcoming regulation changes that everyone thinks will slow down the RB7.

"I don't think they will make the car any faster, but I think it is the same for everybody," he said. "We have got to adapt again, get used to it, but it is nothing new for our team to adapt to a change in regulations. All the teams have to adapt and see what they can do to do the best out of it. I don't think it is going to turn the field upside down. I think everyone will still be in reasonable shape. McLaren and Ferrari are fast, we know that. We are quick but the changes, whether they will turn the championship around, I think it is unlikely."

Alonso doesn't think the tweaks will have a significant effect on qualifying.

"I don't think it will massively change qualifying," the Ferrari driver said. "I think Sebastian was quickest in qualifying. It's true that it wasn't one second, it was two tenths, but he was the quickest in wet conditions at the start of the race. We were following him and he was nearly eight tenths or nine tenths quicker than us on Sunday with race mapping. We saw a superior car at that moment, a dominant car, the Red Bull, in qualifying and in the race as well. It seems that sometimes they push a little bit more, sometimes a little bit less. Because of that, in races you seem a little bit closer. We are not desperate to get pole here or to win this race. We need to know where we are at the moment; we need to keep working, to keep working in the direction we took two races ago, as I said. It seems that we are more competitive but we cannot under-estimate or forget how quick our opponents are."

The Asturian driver was asked to go into detail about the Scuderia's less than ideal season.

"At the moment it is difficult to win a race," Alonso admitted. "There is no doubt that in Monaco and Canada we had the opportunity to win the race. That's a fact. It is not a dream. We were very close. We were in the first row of the grid after qualifying in Canada and we were locentimetres from winning in Monaco, finishing second, so it is true in the last two races the trend is quite good. We improve and we seem to be more competitive. Valencia, the characteristics of the circuit are a little bit similar to Canada and Monaco, so maybe here is another good opportunity but we also cannot forget we are one second behind sometimes in qualifying and with this it is difficult to win.

"I think we need to have the best car," he continued. "If we have the best car we can win the title because there is plenty of time and plenty of races to recover. If we are fifth or sixth, as we are normally in qualifying etc, it's very difficult because you cannot get the pace that everybody is doing. I think the championship is long. We need to concentrate, race by race. We will try to be on the podium, we will try to win every race we do. Obviously this is sometimes very difficult or impossible but this is our aim. We are Scuderia Ferrari Marlboro so this is our goal but, as I said, we need to respect our opponents and we need to understand that in some places, in some races we cannot do that.

"This is also some pressure that you have when you are at Ferrari or when you are Ferrari," the Spanish driver acknowledged. "You need to win every race that you do, you need to win every championship that you do and despite these seven races when I think I drove the best seven races of my career, with the best qualifying laps, compared to my teammate, compared to last year, comparing different years, the starts etc, even with that, it seems that the season has been a very bad season so far, which, in some ways I agree with, because we are Ferrari, we are obliged to win every race but in some other ways, I think we need to understand and respect our rivals and to work harder than them and to close that gap in the near future."

Webber was asked about the legal-illegal nature of components in Fl, and to explain the effect of racing with a legal car for half the season, before being informed that the parameters had shifted.

"There's always something floating around in our sport, isn't there? We know that," the Australian pointed out. "We had the double diffuser a few years ago: some people say it's right, some people say it's wrong and now we obviously have the exhaust thing which is their interpretation. Obviously it's not within the spirit of the rules so we change the rules. Obviously it would have been very, very cost effective for all of the teams to know this before the season started because everyone was already looking at it at the end of last year.

"Obviously, you look at the people from Enstone [Renault] and those guys have done a huge, huge job, packaging their car and designing their concept around something like this working," Webber continued. "So it's not a trivial thing to throw into the middle of the season for the teams but they will all adjust. Everyone is in the same boat so yeah, either at the start or at the end, but in the middle – it makes it a little bit more difficult, but it's the same for everyone. We're not overly concerned. I'm not sitting here saying they shouldn't have done it, it's just that it's not a cheap exercise for people to make adjustments off the back of that.

"I think the majority of the fans aren't that bothered, to be honest," the Red Bull driver concluded. "They just want to see what they have been seeing so far this year which is a lot of interesting car races. They basically have ten to fifteen percent knowledge of what's going on behind the scenes in our sport. They just want to watch a good car race actually. You have really, really hard core fans, obviously, who understand a bit more, but most people want to see a good car race so they obviously have no idea of the politics that go on in the background at this level, because they will always be there. But they're obviously making these decisions because they think it's the right thing for whatever reason it is, so you need to ask the guys who are making the decisions, why they make the decisions. I don't... or the team. You design a Formula I car at the start of the season to a very very, very tight, strict regulation and go through the fine print as much as you can and then obviously there is a massive, massive conceptual change with that design book in the middle of the year. That's the way it is and we have to get on with it."

Jaime Alguersuari's only moment of glory on Thursday afternoon came when the Spanish driver was asked to discuss the potential threat of Daniel Ricciardo, who has been a regular Friday presence this season.

"I think it is interesting as he gets to try different things on the car and at the end, still this year, I did not find the best way to improve the car, the performance, and am just still learning about the set-up, about the tyres, about so many things on the car," Alguersuari said. "It is interesting that he also gets to know the car, to try to improve things on the car. I think it is quite interesting and it makes things a bit easier, a bit faster. But still I am not 100 per cent happy with everything going on. I think Canada was very important for us and we are finding our way to the best performance."

Similarly, Liuzzi's only moment in the sun came when he was asked about HRT's goals in the wake of the best result in the team's history, a Pl3 in Montreal.

"Of course our target, we said from the beginning of the season, is to try to beat both Virgin and Lotus," Liuzzi said. "We know it is not going to be easy but that's what we are aiming for. Lotus is a bit further ahead in terms of lap time in dry condition but the programme for the championship is quite interesting. A lot of development should be coming soon. We are pushing day and night. It is not easy when you are a backmarker but you are still fighting with other teams and you don't have to give up."

Alguersuari and Alonso were also asked to talk about Formula I's impact in Spain.

"Well, when I was a kid, Formula I was not important at all, or was not a sport we followed," Alonso said. "I never saw a race on TV in my life until I was I7 or I8. I was already in Formula Nissan so when I was racing in go-karts I never saw a Formula I race; some news at the end of the year, who was World Champion, who was not World Champion but obviously we didn't know any of the names that were racing. Now, I think it's quite popular in Spain. People love this sport and it's true that it's quite complex, as Mark said, with some regulation changes every year etc. It's not easy for the fans to follow but anyway, I think they love their motorsport as we love motorbikes as well in this country. Generally, I think in go-karts and in different categories now there are many drivers so I'm sure that from now on the future will be much better for Spain and I'm happy because it's obviously my sport and something that I love and now I'm happy that the country shares this love as well."

"I think Spain has always been a motorbike country, especially for the riders and so on," Alguersuari agreed. "As Mark was saying, when Fernando came and he won both titles and so on, it changed TV coverage and for sure there are more drivers coming up and developing themselves in karting as well. I was already in karting when he won his first championship in 2005, I think and then I stepped into the Red Bull Junior team so I never thought about reaching Formula I because I was in go-karting in Italy and Europe so I was just trying to do my best in go-karts. I was having fun there and then when I had the possibility to step up into Red Bull, I obviously had the chance to one day get to Formula I but I started doing Formula Renault and so on but I never thought about reaching Formula I because I would never... no I was just trying to have fun and do my best."

Finally, Webber and Kobayashi were asked about devious behaviour behind the wheel. The exchange has been copied in full below.

Q. Kamui, two weeks ago, you drove a beautiful race but after the finish, two different drivers - Nico Rosberg and Nick Heidfeld - accused you of deliberately braking or at least lifting off just in front of them. Your reaction, and I will also ask Mark to comment, because you know well the danger of this type of situation.

KK: If you want, I can show you the data. I have nothing... Off the line, because only the car is able to stay on the track and I was really pushing. The front tyre lost the grip line, the clean line and I couldn't change the car's direction. I just had to wait otherwise I would be completely on the wet part. I tried to do the best thing, but this was coming from a bit of overdriving.

MW: I think people at hairpins are always trying to mix up the pace a little bit, particularly in Canada. Michael was also doing a good job to make the rhythm a little bit different each lap; that's normal. But obviously hitting the brakes is a different story. Obviously if you're a bit later, a bit earlier on the throttle, that's part of racing but if you're playing with the brake pedal it's obviously not something that we all agree to. I'm sure he's not playing these tricks.

Fl Valencia Blog - FPl in Valencia

It is hot out there. Hot, grey, and incredibly dusty. So dusty, in fact, that even the McLaren brand centre (uber-motorhome to the rest of us) has

footprints on the floor.

Usually it's so clean you could eat from it.

That dust means that even the smallest error can prove costly, with grip a serious issue. But, thanks to advances in rubber made by new tyre suppliers Pirelli, drivers are reporting better handling than they're used to on a notoriously green track.

While it's hot outside for a wilting English flower, it's not too hot for tyres. The track temperature increased over the course of FPI, but hovered around the 30 degree mark before climbing to 35 degrees; still significantly cooler than had been feared. This afternoon's running is likely to be another matter entirely, however.

As tends to be the case with free practice, it took a little while for the session to really get underway. While some drivers completed timed laps in the first 30 minutes, the bulk of teams used the early part of the morning to get installation laps underway, collecting as much data as possible on Pirelli's new medium tyre. The revised compound was first tested on Friday in Montreal; this weekend will see its first in-race use.

The first serious incident of the session came courtesy of Nico Hulkenberg, who was getting some Friday running in for Force India. The German driver lost the rear end of his car and crashed into the wall, leading to some pretty hefty repair work for the team's mechanics as they tried to prepare the car for Paul di Resta's use in FP2.

The other incident of note came via Timo Glock, who used the opportunity of the closing minutes of FPI to show off his handbrake turn skills. Maybe not. The Virgin driver came round Turn 5, lost control of his car, but then neatly parked it sideways across the track, missing both walls and any form of crash. It was ably done.

Karun Chandhok, who was getting in some Friday practice for Team Lotus, suffered a few mechanical problems on his initial run – speaking to the BBC, Chandhok said that he left the pits, discovered he had no second gear, and cruised back round to the garage. The mechanical troubles are bad news for Jarno Trulli, who is expected in the car this afternoon. The Italian driver has seen a host of mechanical difficulties over the past two years, and it appears he is now losing his motivation to carry on in Formula I, if an interview published last night is anything to go by.

Thanks to the power of Twitter, we are informed that Red Bull will be trying out their Silverstone-spec engine mapping during Friday practice. Unfortunately, it's not confirmed whether that took place in FPI or is still to come this afternoon.

The bulk of the session was standard practice fare – times changed regularly, various programmes were tried and tested, and a lot of time was spent in the various garages fine-tuning set-ups.

The Ferraris, Renaults, and Red Bulls (well, Mark Webber's Red Bull, anyway) were consistently fast, swapping places in and around the top five. The McLarens troubled them on occasion, but the Woking team were never at the top of the list.

Turn 13 proved to be the most troublesome in a pretty error-free session, with both Kamui Kobayashi and Nico Rosberg missing the apex on occasion. Chandhok came off at Turn 5, but continued, while Michael Schumacher had a brief off at Turn 2l before continuing.

FPl timings (unofficial)

- l. Mark Webber (Red Bull) 1.40.403s [22 laps]
- 2. Vitaly Petrov (Renault) 1.41.227s [20 laps]
- 3. Fernando Alonso (Ferrari) 1.41.239s [22 laps]
- 4. Lewis Hamilton (McLaren) 1.41.510s [23 laps]
- 5. Nick Heidfeld (Renault) 1.41.580s [24 laps]
- 6. Felipe Massa (Ferrari) 1.41.758s [23 laps]
- 7. Jenson Button (McLaren) 1.41.926s [14 laps]
- 8. Adrian Sutil (Force India) 1.41.955s [20 laps]
- 9. Nico Rosberg (Mercedes) 1.42.043s [22 laps]
- 10. Jaime Alguersuari (Toro Rosso) 1.42.216s [29 laps]
- Il. Michael Schumacher (Mercedes) 1.42.270s [26 laps] I2. Daniel Ricciardo (Toro Rosso) 1.42.412s [27 laps]
- 13. Rubens Barrichello (Williams) 1.42.704s [23 laps]
- 14. Sergio Perez (Sauber) 1.42.738s [20 laps]
- l5. Pastor Maldonado (Williams) l.42.84ls [28 laps]
- 16. Sebastian Vettel (Red Bull) 1.42.94ls [21 laps]
- 17. Kamui Kobayashi (Sauber) 1.43.201s [18 laps]
- 18. Nico Hulkenberg (Force India) 1.43.769s [7 laps]
- 19. Heikki Kovalainen (Lotus) 1.44.136s [17 laps]
- 20. Jerome D'Ambrosio (Virgin) 1.45.026s [17 laps]
- 21. Timo Glock (Virgin) 1.45.22ls [19 laps]
- 22. Tonio Liuzzi (HRT) 1.45.494s [24 laps]
- 23. Narain Karthikeyan (HRT) 1.46.926s [27 laps]
- 24. Karun Chandhok (Lotus) NO TIME SET

Fl Valencia Blog - FP2 in Valencia

By the time the pitlane opened for the afternoon practice session in Valencia, track temperature had climbed to 38 degrees, despite an increasingly

grey sky. Air temperature was 26 degrees, but the breeze off the harbour means it felt cooler.

Pirelli's medium tyre (white markings) got a lot of running this afternoon, as teams did their best to establish the point at which performance was likely to drop off. As this rubber has yet to be tried out in race conditions, there is a lot of learning to do before teams can make effective use of the revised compound in their strategic planning.

Paul di Resta lost out on running time in the early part of the session, thanks to Nico Hulkenberg's FPI crash. The Force India reserve driver was behind the wheel of di Resta's car when he lost the rear end and hit the wall, and the team were unable to complete the rebuild during the lunch break. Di Resta finally made it out on track with 10 minutes to go, and managed to complete 7 laps. Impressively, despite his extreme lack of running, di Resta was only 0.7s slower than teammate Adrian Sutil, who managed 3l laps.

Another man to miss out on a significant chunk of the afternoon was Toro Rosso driver Jaime Alguersuari, who found himself sidelined by unexplained mechanical problems that saw the team de-gearboxing his car. Yes, that is a word – I just made it up. If the team were eventually able to identify the issue, they did not publicise their findings, and the Spanish driver was unable to complete any running this afternoon.

The first half hour passed without any incidents on track, thanks in no small part to the extra rubber laid down by the GP2 and GP3 practice sessions that took place over lunch. Both GP2 and GP3 use Pirelli rubber, and on a green street circuit like Valencia, every little helps. With improved grip, the times began to fall below the lm40s mark for the first time this weekend. The lap record here is l.38.683s, and it is likely to be broken at some point between now and Sunday.

Around the session's half-way mark, drivers began to switch to the soft tyre compound (yellow markings), leading to a further fall in lap times.

The final half hour became a battle for the top; once drivers went out on the soft tyres lap times fell like dominoes. Nick Heidfeld was the first man to top the timesheets in the final phase, setting a l.39.040s, but he was quickly beaten by Nico Rosberg's l.39.012s. Next to top the timesheets was Mark Webber, who managed a l.38.53ls, the first driver to get into the lm38s this weekend.

Webber's time was soon bested by teammate Sebastian Vettel; the German driver crossed the line in 1.38.265s, prompting fears that the FIA's recent rule tweaks would lead to more of the same-old, same-old when it came to general RBR supremacy.

But Lewis Hamilton took the wind out of Vettel's sails with a l.38.195s, before he was bested by former teammate Fernando Alonso, who posted a l.37.968s that proved to be unbeatable.

Turn 2 proved to be the problem area of FP2, with two offs from Narain Karthikeyan and an off from Rubens Barrichello. Fernando Alonso also came off at Turn 2, but all of the corner's 'victims' managed to escape unscathed; the only damage done was to their lap times.

FP2 timings (unofficial)

- l. Fernando Alonso (Ferrari) 1.37.968s [35 laps]
- 2. Lewis Hamilton (McLaren) 1.38.195s [26 laps]
- 3. Sebastian Vettel (Red Bull) 1.38.265s [31 laps]
- 4. Michael Schumacher (Mercedes) 1.38.315s [30 laps]
- 5. Felipe Massa (Ferrari) 1.38.443s [32 laps]
- 6. Jenson Button (McLaren) l.38.483s [30 laps]
- 7. Mark Webber (Red Bull) 1.38.53ls [26 laps]
- 8. Nico Rosberg (Mercedes) 1.38.98ls [33 laps]
- 9. Nick Heidfeld (Renault) 1.39.040s [35 laps] 10. Vitaly Petrov (Renault) 1.39.586s [27 laps]
- ll. Adrian Sutil (Force India) 1.39.626s [31 laps]
- 12. Rubens Barrichello (Williams) 1.40.020s [34 laps]
- l3. Pastor Maldonado (Williams) 1.40.30ls [34 laps]
- 14. Paul di Resta (Force India) 1.40.363s [7 laps]
- l5. Sebastien Buemi (Toro Rosso) l.40.454s [32 laps]
- 16. Sergio Perez (Sauber) 1.40.53ls [37 laps]
- 17. Kamui Kobayashi (Sauber) 1.42.083s [34 laps]
- 18. Heikki Kovalainen (Lotus) 1.42.156s [39 laps]
- 19. Jarno Trulli (Lotus) 1.42.239s [25 laps]
- 20. Timo Glock (Virgin) 1.42.273s [21 laps]
- 21. Jerome D'Ambrosio (Virgin) 1.42.809s [36 laps]
- 22. Tonio Liuzzi (HRT) 1.44.460s [29 laps]
- 23. Narain Karthikeyan (HRT) 1.46.906s [16 laps]
- 24. Jaime Alguersuari (Toro Rosso) NO TIME SET

Fl Valencia Blog - Friday press conference in Valencia

Or dinarily, this article would see the press conference quotes strung together to form a coherent whole without any of the boring bits.

But as the senior team personnel press conference – starring Ross Brawn (Mercedes), Mike Gascoyne (Team Lotus), James Key (Sauber), Geoff Willis (HRT), and Franz Tost (Toro Rosso) – concentrates on important issues, I thought it best to reproduce the session in its entirety.

- Q. Mike, can I start with you. Principally about General Electric. What sort of effect are they going to have on the team? Mike GASCOYNE: Well twofold. It is great to have one of the world's biggest corporations coming on board in what is a very major sponsorship deal for the team and I think it really makes the future look very good for us, both financially and also as a technical partner. I was lucky enough to visit their research facilities when we went to New York to make the announcement and I they havel some fantastic technology and facilities. It was actually, for me as an engineer, very inspiring to go around their labs just and see the level of technology and enthusiasm and the freedom to think. I think in Formula I we are very good at what we do in getting to races every two weeks and turning things around very quickly but sometimes as engineers we lose that capacity to think and be innovative and give people the freedom to have time to do some fundamental research. So it was very inspiring for me, as an engineer, to go around there, and I am sure some of the technologies they have got in battery technologies and electric motors for electric vehicles will be very relevant to where Formula I is going in the future. All in all, on all fronts, a fantastic announcement for the team.
- Q. When do they start getting involved?

MG: Well, I think you will see at the next race the unveiling of the car with all the signage on and from a technical point of view we are already in discussions with them.

Q. Geoff, 13th place in Canada, most people would say not fantastic but it was a step forward for yourselves, so what are the aims now for the rest of the season?

Geoff WILLIS: Certainly, it was a good result for us, if 13th place is ever a good result. It was important for us in the championship fight we are having. Again those sorts of races are races where you have to finish and you have to finish as far up as you can. Those are the times when a backmarker team can get lucky but you have to make your luck. We are still developing the car this year. We will carry on as long as we can through the season. We were going to have a development here that actually will come to Silverstone and we are trying to get something on the car pretty much every race I would say for the next four or five races. We have got a new wind tunnel programme starting very shortly, which we will do some 20ll car work on, so I am hoping we will get something from that test immediately on the car.

- Q. Are you just duelling, as it were, with Marussia Virgin or are you aiming at Lotus as well? GW: I think you always have to aim high and being realistic there is quite a big gap to cross. It would be nice to be able to cross some of the gap this year and continue to cross it next year.
- Q. James, slightly contrasting messages coming out of your team. You said that you slightly need to improve on qualifying, you feel that you need to. Then, yesterday, Kamui Kobayashi basically said that qualifying wasn't that important. Interesting contrast.

James KEY: Well I guess Kamui is a bit individual in that respect isn't he, as he is such a good racer and he again proved in Canada I think that he can go from one position and quickly make places up. But I think as a team in general our race performance is much better than qualifying. I think it has got something with the way we are using the tyres. But if we need to look at our race weekend and improve one part of it, I think for us it is qualifying. We tend to build up to it and I think in Canada it was a bit of a disappointment. In Monaco it was better up to a point, obviously, but I think that's our focus at the moment – to try and make the car quicker over the weekend.

- Q. Just talk a little bit about Kamui. How pleased are you with his performance and how far can he go do you think?

 JK: Well, we are very pleased, as he has continued from where he left off last year. The good thing with him is that he does challenge in races. He has got a very good racing head on him. Even in Canada I think he made up three or four places until we had the red flag and that's the wet conditions. But he keeps it clean. You know he is not knocking his front wing off every five seconds, so I think we are extremely pleased to have him in the team again this year and he is continuing to prove to be a great racer. Kind of going off from last year, we continue to have a lot of faith that he can make a strategy work which with these tyres et cetera is quite important I think.
- Q. Ross, we are seeing you it seems inching up the hierarchy. Is that the case at the moment? We saw Michael [Schumacher], for example, fourth this afternoon and he was very nearly on the podium in Canada.

 Ross BRAWN: I think they are little snapshots rather than the complete movie. We can, in certain circumstances, make an impact but not consistently enough. You have to say at the moment the only team who is consistently performing is Red Bull. We have those little short periods when things can look good but we cannot put the whole thing together yet. That's what we have to do. We have to improve the car to put the whole thing together.
- Q. Do you think Michael has got back into his rhythm now? We saw it in Canada and we are seeing it here.

 RB: Well, I thought he was always in his rhythm. As I say in Canada we gave him an opportunity to demonstrate it to a bigger audience. But if you watch his racing, particularly at the beginning of the race, we are always highly entertained by the in-car coverage we see of Michael, it is great. I think he has got one of the best records this year for people gaining positions in the first few laps. An opportunity developed for him to show what he has been doing all the time and what we have been seeing all the time and I think for both drivers [is] if we can give them the right car they will both succeed.
- Q. Franz, first of all can we have a little update on what happened this afternoon.

Franz TOST: We started the engine on Jaime Alguersuari's car for the second free practice. We recognised a strange noise, a mechanical noise, and then we removed the gearbox and started once more, but it seems that we had a mechanical failure and therefore, unfortunately, he couldn't go out. The engineers are just investigating the reason for this. I don't know currently what happened.

- Q. How much do you think that is going to hurt him in terms of overall time?

 FT: Especially on such a track here in Valencia it is important to do as many laps as possible and therefore it is not a good preparation for him for tomorrow. Hopefully, we can sort out all the problems so he can do a good third practice session and be prepared then for qualifying.
- Q. We see Scuderia Toro Rosso very much as the Red Bull junior team, which is very much what it was set up to be initially. One driver is in his third season. The other driver, it is his second season. Admittedly you are trying Daniel Ricciardo but there is also Jean-Eric Vergne in the wings as well. What is the policy now for the team these days?

FT: The policy for the team is that it is the Red Bull rookie team. When Dietrich Mateschitz and Red Bull bought Minardi the reason for this was to give young drivers from the Red Bull driver pool the chance to come into Formula I. To be educated in Formula I and then to be transferred to Red Bull

Racing if they show good performance. Sebastian Buemi is doing his third season and so far he is performing well. Jaime is in his second season and he had a little bit of troubles at the beginning of the season but in Canada he showed a good performance. We will see how he will do in the next races. Ricciardo is the driver on Friday. We prepare Ricciardo for the future and so far he is doing a good job and then we will see.

Q. There are technical matters. The the map changing, which obviously is being stopped here, off-throttle blown diffusers, exhaust, the future engine. Pick one of those subjects that most concern you. Mike, would you like to start.

MG: I think with the changes for here and Silverstone, I don't think the changes here will radically affect anyone. Yes, people were running sort of more extreme maps in qualifying but I don't think the effect will be very great for any team. I think, on the change for Silverstone with the blown diffuser, I think it is frustrating when there is a change in the middle of the season. We have all spent a lot of money developing something. I think from a pure point of view, as an engineer, Charlie [Whiting's] interpretation within the rules, I think you can argue that it is probably correct in some respects. We, as engineers, are always pushing to get an advantage and will obviously implement it if it is within the rules. If Charlie thinks it has gone too far or if something shouldn't be happening then he is right to act. It is just frustrating it is done in the middle of the season without consultation. I think that is the main sticking point for everyone really. But we have all got to get on with it. Is it going to change anything? Probably not. For sure the teams at the front have probably got more developed blown diffusers and will take a bigger hit. For those of us at the back that have only started with that technology this year, probably the effect we are getting will be slightly less but actually will it change the pecking order? Probably not. It will just compact it a little bit.

Q. Geoff, what's your chosen subject?

GW: Well, I think I will stick with the technical directive changes and the changes for Silverstone, as it is a complex issue. We can debate whether or not the technical directives are a regulation change or not, but for a small team these changes are significant in a sense that we have to make decisions on our cost performance criteria whether we do something or not. And in our particular case, we started to play catch-up by modifying exhausts to get some performance benefit. [We] stopped that when TDI5 came out. [We] realised when TDI6 came out we could carry on, missed a race from it and then introduced it for Montreal, where it was probably a significant help getting that PI3, which is pretty important for the team. Now, we will lose a little bit of performance from it in its Silverstone guise and that probably might be the wrong side of the performance-cost criteria for a small team like ourselves and we may well have spent that budget elsewhere. Or certainly [spent] that time and effort elsewhere. But the bigger picture here is that, as Mike has hinted at, we probably shouldn't be making these changes mid-season. We can argue, for example, why, with the F-Duct, we waited until the end of the season and why some other things historically have been changed mid-season and other ones at the end of the season. Really the Technical Working Group is the group that should be making recommendations about technical regulations and clearly if there is something, whether or not if it is a regulation change strictly or whether it is an interpretation change, if we do that mid-season it is clearly going to be very difficult in the TWG to get agreement or even to have an open - and I hope all discussions are rational - but an open and unbiased discussion, as clearly some teams will take a benefit from a change and some teams won't. We really should be moving these sorts of discussions into next year's regulations or even further away, such that we can have an appropriate and what I would say is a complete disinterested conversation about it. But, for example, if there was an issue that came up mid-season that was a safety critical thing then without doubt we would discuss it and if we had to we would change rules mid-weekend if we had to if it was that important. But that's what I think at the moment. We do need to have a proper process where we discuss things in the TWG and it goes through the hierarchy of TWG, Fl Commission, Council or whatever.

Q. James?

JK: Well, I think on a similar note from our side it has been good to have some clarity from the FIA as it is, as Geoff says, a pretty complicated area. You are always going to have exhaust gas exiting the car somewhere, so you will always have some form of aero influence. So, in that respect, I think what has been done for next year with some proscribed position for the exhaust is very sensible, as it removes all the ambiguity and also removes a fairly expensive development direction which, as people have seen from this year, is pretty expensive and complicated. I think the moves for next year are sensible. The change in the middle of the season is always going to be tricky because it does alter things. Having said that, I think there is a distinction between the exhausts and things like the F-Duct and the diffusers that we had recently as they were deemed legal and I think that is the distinction for a mid-season change rather than an end of season.

Q. Ross?

RB: I think James probably touched on it very well there in terms of it not being a change of regulation; it's a realisation. The things we were doing, that type of interpretation is not legal. I think the difficulty the FIA had is that the protagonists behind raising this issue were threatening to protest the cars and that was the difficulty they had. They couldn't ignore that and once they were made aware of the technology I think they started to sympathise with the view that the people who were upset about it had, because the FIA didn't discover this by themselves, they were alerted about it by a team. And once that ball started to roll, they probably had little choice but to decree what should happen. If they hadn't have taken action, then it sounds like some teams were going to protest the situation to get clarity through the stewards and that wouldn't be very good for Formula I. We want to avoid that at all costs because I know from experience that the stewards would find such a technical argument quite difficult to resolve and it would probably end up in the appeal courts again and that's no good. I think it's probably being dealt with in the best possible way but what we need now is absolute clarity on where we're going with this and I think having the exhaust moved next year is very important because we don't want this to end up as another argument of the type we had about traction control: what was traction control, what wasn't traction control, what you couldn't do? We want clarity because, as you know, the traction control issue has not been discussed for several years, and we don't want to have the exhaust blown issue being discussed and being a major distraction to what we're doing. So we will cope – I think we will all cope this year. It will make a difference to the cars. We've got a new floor coming at Silverstone which is designed around that technology. We've got to decide what we're going to do now but I think having the exhaust moved next year should bring clarity to this area. But there wi

FT: Yeah, we have invested a lot of money in development and research on this special exhaust system. OK, the important thing is, as Ross just mentioned, the clarity in the regulations, and regarding the mapping, we rely on Ferrari, because they provide us with the engines. It's difficult to estimate the performance loss we will see in Silverstone.

Q. (Joe Saward – Grand Prix Special) On a question about regulations, we have a situation where, in December, there was a regulation decided for 2013 and apparently that's now changed completely and will be coming in 2014. Can you give us some idea whether we can actually trust that as a final result, or will you all agree on something else at a later date? Ross would be a good person here.

RB: I'm pretty confident that's the final result. I think the initial proposal didn't seem to have a complete consensus, complete support from all the manufacturers. All the manufacturers who are currently supplying engines in Formula I have signed an agreement that this is the engine we're going

to support in the future. That's as good as it can be.

Q. (Ann Giuntini – L'Equipe) And about this engine, to all of you, if it is a V6, as it looks like being, what are the advantages of a V6 over an in-line four cylinder, and will there be a problem with cost? It could cost more.

RB: I think there are many considerations we have to make when we are changing the powerplant in Formula I and obviously the technology in the automotive field is changing and the big question is how relevant do we need to be and how relevant do we want to be. I think there is a justification for relevance in the type of engines we have in the future. We don't want to end up as a dinosaur in five or ten years and the technology I see that we're working on with these new engines is the technology that is going to become commonplace in road car engines in the future: small capacity, turbocharged engine, direct injection, special KERS systems. They're all going to be the technology we're going to be using in the future and when you do that, you can generate a lot more interest with a manufacturer, and we want to try and get some manufacturers back into Formula I and we won't get that if we continue with a V8 normally aspirated engine. So I think the engine has much more relevance. The cost is a very good question. I think the concept of the resource restriction we have with the chassis is now being put in place for the engine, to make sure that there is a framework that you have to work within, to design, build and develop this engine and the FIA are working with the manufacturers to create that framework and I think that's a very important initiative to encourage manufacturers to come in, because they will know that they can enter Formula I for a cost and they won't get outspent. They will need to be cleverer than their competitors for the same amount of money.

Q. (Joe Saward – Grand Prix Special) Can I ask all of you, with the exception of Franz; you're engineers, getting to play with advanced systems, how much more gripping is it for you, as a task, as opposed to what you're doing now, because it's so restricted, what you're allowed to do and what you're not allowed to do? Is it more fun when you've got things that are unrestricted?

MG: I think Formula I shows that as the regulations involve and stop things, then engineers come up with new avenues and we've seen, with things like F-ducts and blown diffusers, engineers will always be inventive, whatever the restrictions placed upon them. I've been in this game too long – 23-odd years – and I don't think it's really changed for me, as an engineer. You're still looking for innovation, you're still pushing, you're still developing in every area, so as the old saying goes, as one door closes and another one opens. I don't think the restrictions we've had have really limited what we can do from an engineering point of view. The gains might be smaller, but they are still gains, which are significant and move you up and down the grid, so for me there's still the challenge that there always has been.

GW: I think the task of engineering is really resource management and dealing with restrictions, whether they are financial, time, resource, material properties, whatever, so in that sense, it doesn't really matter what set of even arbitrary constraints we've got, we still have a very interesting engineering challenge. In that sense, I completely agree with what Mike's saying. Probably the thing that concerns me is when we put all that constructive effort into something that is in itself not a particularly beneficial step forward in technology, so I think we have to... for the interest from the engineers' point of view, it's always there because we are solving problems, we're all competitive. But it would be good to make sure that we do keep a certain amount of relevance, whether as Ross has said earlier, whether it's of direct relevance to the business of major car manufacturers behind the Formula I teams, or whether it's of relevance to the sorts of technologies in aerospace and related industries that support a lot of the other parts we do on the chassis.

JK: Personally, I think that the constraints or restrictions, if you like, actually breed a bit of innovation because you level out pretty quickly, and I think that when the 2009 aero regulations first came in, it looked pretty basic to begin with but soon there were all sorts of tricks we could play. Looking at the last three years, with double diffusers, F-ducts, the exhaust recently, we wouldn't have thought of such things maybe five years ago when the regulations had been around in a certain state for a long time. So, personally, I think that knocking some of these things out as Ross suggested, there will be something else round the corner and as an engineering challenge it's great because there's always a bit of fresh thinking needed. So I'm not massively concerned about it, I think it's a good thing, in a way.

RB: It's a position we're all in, so whatever the constraints of that competition, we've got to be innovative and try and find the best solutions. Personally, from an engineering perspective, I think it's a little bit of a shame that we're so biased towards aerodynamics and not more towards systems or suspension because all these systems and things that we'd like to do have had to be stopped because we go too fast and we get too fast because we optimise the usage of the aerodynamics and it would be nice to find a way of pulling back the aerodynamics and allowing a bit more freedom in these particular areas, but that's just a personal view of finding a balance. So, I think we will never be able to ignore the aerodynamic performance of a Formula I car and that's one of the things that make it so special. I think it would be interesting to just change that equilibrium a bit and perhaps give some more freedom. We had to stop active suspension because of the aerodynamics, not because active suspension itself was a problem. It would be nice to get a different equilibrium in the equation, one day.

Q. (Joe Saward – Grand Prix Special) As a follow up to that, is there more enjoyment or more sense of achievement if there's a relevance to it?

RB: I think you've got more opportunity to find more partners in the business if there's some relevance to it. Mike touched on General Electric. It's a fantastic partnership but there will be a limitation to what they can get involved in because, at least in my experience, there's not many people outside of Formula I who can really contribute very much towards the aerodynamics. They might help with some of the methodology but they can't contribute very much towards the aerodynamics. It is so specialised, or seems to be so specialised. It would be good if we could have those hooks that we get people involved in Formula I in lots of different areas, so manufacturers can justify even more their involvement in Formula I because they're getting not only branding but direct technical benefit or gains from what they're working on in Formula I, so the cost of that technology gets spread into their organisation. What we learn in aerodynamics doesn't get passed back to a road car. Our KERS system, interestingly, has got passed to our road car side and the SLS Electric has got a Formula I KERS system in it.

Q. (Laurentzi Garmendia – Berria) Ross, if there wasn't a team telling the FIA about these hot blown diffusers, how long and how far do you think you could go; what would have been the benefit you get from this?

RB: I think it was opening up a lot and I think each time you do a car, you can look at the concept again, you learn a lot from the application. Each time you do a new car you can look at the layout of the car, where the suspension goes, where the gearbox goes, the layout of all the major pieces to try and optimise that technology, so I think it had a long way to go. It was actually proving quite an interesting area. We feel we're quite low on the slope of getting the most out of it, so I think there was a lot of potential in the system, which will be stopped next year with the mandatory exhaust outlets.

Q. (Matt Youson – Matt Youson and Associates) Ross, have you got the same economy targets that were placed for the four cylinder engines or do you need to reduce the ambitions?

RB: No, we're keeping the same efficiency objectives that we had with the straight four, [it's] probably be a little bit more challenging with a six but we want to keep the same efficiency objective, and one of the objectives is to increase the targets in terms of lowering them in future years, so that can be the target for the engineers to try and achieve increasing performance or keep maintaining the performance with less and less fuel, which I

think is a really interesting challenge. What we don't want is a situation where we have an amount of fuel you race with and you might run out on the last lap. We don't want that. We want measured fuel efficiency, maximum fuel flow rates and try and control it in a way that still encourages interesting and exiting racing.

Fl Valencia Blog - FP3 in Valencia

It was a slow start to the final practice session on Saturday morning in Valencia.

With the first round of installation laps completed within five minutes of the pit lane opening for business, it was all quiet on the harbour front until Jerome D'Ambrosio broke the silence and set the first timed lap of the day.

The morning dawned hot, and only got warmer as the session progressed. When FPI began, air temperature was 25 degrees, with track temperature at 35 degrees. When the chequered flag fell an hour later, the air temperature had climbed to 26 degrees, while the track was a blistering 43 degrees.

In the early part of the session, the times set were significantly slower than the 1.37s and 1.38s seen on Friday afternoon – Michael Schumacher's first effort came in at 1.52.803s, while early pace-setter Jaime Alguersuari was only able to manage a 1.42.443s. But the Friday afternoon times were largely set on the soft compound, whereas this morning's initial laps were largely run on the medium.

There were complaints yesterday that Pirelli's revised medium compound suffered from a serious lack of grip; Lewis Hamilton said the difference between prime and option was like going from driving on an ice-rink to running on rails.

It was only as the session approached its mid-point that times began to fall. Ferrari driver – and local hero – Fernando Alonso was the first man to break through the 1.40s barrier, crossing the line in 1.39.743s and dethroning his teammate in the process.

Neither Mark Webber nor Sebastian Vettel set timed laps until half way through the morning session. Vettel's first effort saw him cross the line in 1.40.217s, which was briefly good enough for P5, while Webber's 1.39.738s put the Australian driver in P3 and demoted his teammate to P6.

Also around the half-way point, Team Lotus driver Jarno Trulli experienced technical difficulties when his engine cut out with a presumed electrical fault. The team fixed it quickly, and he was back on track within fifteen minutes.

With twenty minutes remaining of the end of the session, the track filled up with drivers doing qualifying simulations on the option tyre. As was the case yesterday afternoon, the times began to tumble. The Mercedes pair were the first men whose switch to the soft rubber inspired fear along the pitlane: Michael Schumacher used a three-lap option run to split the two Red Bull drivers at the head of the pack, setting a 1.38.799s for Mercedes. But Schumacher was bested by his teammate, who used the yellow Pirellis to set a 1.38.580s, putting him at the top of the timesheets with a 0.114s gap to Vettel in P2.

It was enough to inspire the rest of the pitlane to follow suit, with yellow tyres for all.

The final fifteen minutes of the session were dedicated to the option compound, as despite Red Bull's seemingly inevitable dominance some hope could be found in the softer – grippier – rubber.

Alas, it was not to be. Despite lap time improvements up and down the timesheets, Vettel was fastest when the chequered flag fell. The Red Bull driver led Alonso by 0.420s: Massa was a further two-tenths slower in P3.

FP3 timings (unofficial)

- 1. Sebastian Vettel (Red Bull) 1.37.258s [15 laps]
- 2. Fernando Alonso (Ferrari) 1.37.678s [16 laps]
- 3. Felipe Massa (Ferrari) l.37.840s [17 laps]
- 4. Mark Webber (Red Bull) 1.38.063s [13 laps]
- 5. Jenson Button (McLaren) 1.38.326s [13 laps]
- 6. Nico Rosberg (Mercedes) 1.38.580s [15 laps]
- 7. Lewis Hamilton (McLaren) 1.38.74ls [13 laps]
- 8. Michael Schumacher (Mercedes) 1.38.799s [14 laps]
- 9. Vitaly Petrov (Renault) 1.38.822s [17 laps]
- 10. Nick Heidfeld (Renault) 1.39.113s [15 laps]
- ll. Adrian Sutil (Force India) 1.39.4lls [19 laps]
- l2. Sergio Perez (Sauber) l.39.778s [l8 laps]
- l3. Paul di Resta (Force India) l.39.823s [18 laps] l4. Kamui Kobayashi (Sauber) l.39.848s [18 laps]
- 15. Sebastien Buemi (Toro Rosso) 1.39.888s [17 laps]
- 16. Rubens Barrichello (Williams) 1.39.987s [18 laps]
- 17. Pastor Maldonado (Williams) 1.40.004s [16 laps]
- 18. Jaime Alguersuari (Toro Rosso) 1.40.239s [20 laps]
- 19. Heikki Kovalainen (Lotus) 1.41.267s [15 laps]
- 20. Jarno Trulli (Lotus) 1.41.690s [18 laps]
- 21. Timo Glock (Virgin) 1.42.557s [18 laps]
- 22. Tonio Liuzzi (HRT) 1.43.243s [17 laps]
- 23. Jerome D'Ambrosio (Virgin) 1.43.309s [18 laps]
- 24. Narain Karthikeyan (HRT) 1.44.630s [19 laps]

Fl Valencia Blog - Ql in Valencia

As the pitlane readies itself for the start of this afternoon's European Grand Prix qualifying session in Valencia, air temperature has climbed to 26 degrees, while track temperature is 44 degrees.

There's not a cloud in the sky, and conditions are expected to remain steady for the next hour.

Sergio Perez will be taking part in qualifying for the first time since his horrific Q3 crash in Monaco four weeks ago; the Mexican driver felt unwell in Montreal and handed his race seat to Pedro de la Rosa for the weekend.

First man to post a time is Renault driver Nick Heidfeld, who crosses the line in 1.41.897s.

Five minutes into the session, and everyone is out on track barring the two McLaren drivers, the Toro Rosso pair, and Perez. Jenson Button leaves the pits as I type, and he is quickly followed by Hamilton. McLaren appear to have learned the wisdom of setting an early banker in case something silly

Fastest man on track at the five minute mark is one Mark Webber, who sets a 140.429s.

The bulk of teams appear to have elected to use the medium compound in Ql, despite driver complaints about reduced levels of grip. Saving as many sets of the softer compound for race day as possible is still the name of the game.

Sebastian Vettel is currently leading with a 1.39.965s, and the dropout zone is comprised of Pastor Maldonado and Jarno Trulli, who have set times, and Hamilton, Perez, Sebastien Buemi, and Jaime Alguersuari, who haven't.

But as more times go up on the board, the dropout zone changes shape.

Button goes fastest with a 1.39.605s, while his teammate is in P5 with a 1.40.258s. Down in the dropout zone are Perez, Maldonado, Buemi, Alguersuari, Tonio Liuzzi, Jerome D'Ambrosio, and Narain Karthikeyan. The session is now half-run.

Vettel pops back up in Pl with a 1.39.356s; even the men at the top do not seem comfortable with their bankers at the moment.

With less than eight minutes remaining, Perez, Buemi, and Alguersuari finally leave the pits. All appear to be on the softer tyre.

Hamilton goes fastest with a l.39.244s. While times are changing non-stop, none of the big names are at risk of dropping out in this session. Once the three tardy drivers set their times, we'll have a much more realistic perspective of those likely to make up the back of the grid.

Vettel is fastest again, and Perez pops up in P4. Buemi demotes him to P5, and Alguersuari crosses the line in 1.40.498s, good enough for P9.

With less than three minutes remaining, the dropout zone is made up of Kamui Kobayashi, Trulli, Timo Glock, Liuzzi, D'Ambrosio, Karthikeyan, and Maldonado. The three fastest men - Vettel, Hamilton, and Button - have all returned to the pits.

And as I typed the above, Adrian Sutil popped up in P3, pushing Button down into P4. Michael Schumacher goes P2, and Nico Rosberg claims P4. The top five is currently: Vettel, Schumacher, Hamilton, Rosberg, and Sutil.

Mark Webber is down in PI7, and could be at risk of dropping out if faced with a knock-out lap from Heikki Kovalainen or Kobayashi. Maldonado has saved himself with a 1.39.690s, which put the Venezuelan driver in P9. Webber goes up to Pl3 as the chequered flag falls, demoting Alguersuari into the dropout zone.

And Massa goes fastest, setting a 1.38.413s on the option tyre.

Dropout zone

18. Jaime Alguersuari (Toro Rosso) 1.40.232s

19. Heikki Kovalainen (Lotus) 1.41.664s

20. Jarno Trulli (Lotus) 1.42.234s

2l. Timo Glock (Virgin) l.42.553s

22. Tonio Liuzzi (HRT) 1.43.584s

23. Jerome D'Ambrosio (Virgin) 1.43.735s

24. Narain Karthikeyan (HRT) 1.44.363s

Fl Valencia Blog - Q2 in Valencia

Jaime Alguersuari joined the drivers from Lotus, Virgin, and HRT in the Ql dropout zone.

The Toro Rosso driver had a late start to the session, leaving the garage with only five minutes remaining.

But that's ancient history now, as the pitlane has just opened for Q2 at the Valencia street circuit. All eyes are on tyre choice - Felipe Massa blew them

all away in the closing stages of Ql with a run on softs, and the question is will any teams risk trying to make it through this session on the medium compound?

Renault report that Nick Heidfeld is going out on a used set of softs; his could be an interesting benchmark time.

The first driver to complete a timed lap in Q2 is Massa, who crosses the line in 1.38.566s. Everyone bar Sebastien Buemi and Vitaly Petrov is out on track.

Mark Webber beats Massa's time, but is immediately pushed in P2 by Fernando Alonso, who sets a benchmark time of 1.37.930s before being beaten by Vettel's 1.37.305s.

Lewis Hamilton and Jenson Button push Alonso down to P4, although both are four-tenths down on Vettel.

Just under ten minutes remaining of Q2, and the dropout zone is made up of Rubens Barrichello, Pastor Maldonado, Sergio Perez, Kamui Kobayashi, Michael Schumacher, Petrov, and Buemi. The latter two have yet to put times on the board.

All of the top ten are currently out on track, sharing the space with Maldonado, while the other occupants of the dropout zone remain in the pits.

Ah. Maldonado is still out on track because he's red-flagged the session with a spin at Turn 20 that sees the Williams driver parked up in the middle of the track. This could be very bad news indeed for Petrov and Buemi.

Before the red flag fell, Schumacher saved himself with a P8-worthy 1.39.026s, pushing Force India's Paul di Resta into the dropout zone.

Race control announce that the session will restart in two minutes. It appears that mid-spin, Maldonado managed to stall his engine. Oops.

The pitlane reopens, but there's no exodus onto the track. The top ten are sitting pretty for now, waiting to see what comes of Petrov and Buemi's maiden efforts. Di Resta and Maldonado are the only men in the dropout zone not currently on track; in Maldonado's case it's because he's still heading back to the pitlane.

Just over three minutes remaining, and di Resta has joined the fray. Schumacher, Heidfeld, and Sutil have also got in on the action; as the bottom three men in the top ten they are at risk of dropping out if Petrov and Buemi manage to perform on the two timed runs they've got time for.

Both Renault drivers are currently out on fresh soft tyres; the team has said all weekend that they need to see a good result here if the team are to maintain the promising form of the first few races. Heidfeld and Petrov are currently swapping P9 and PlO back and forth – the fresh softs don't appear to be having enough of an impact to keep Enstone comfortable.

And with the chequered flag waved, the dropout zone is made up of Sutil, Petrov, di Resta, Barrichello, Kobayashi, Maldonado, Perez, and Buemi, although there's still time for improvement.

Buemi, Kobayashi, and Maldonado are back in the pits and out of qualifying, while the others are still out on track. Petrov joins them in the dropout zone, as do di Resta, Barrichello, and Perez.

Dropout zone

- ll. Vitaly Petrov (Renault) 1.39.068s
- 12. Paul di Resta (Force India) 1.39.422s
- 13. Rubens Barrichello (Williams) 1.39.489s
- 14. Kamui Kobayashi (Sauber) 1.39.525s
- 15. Pastor Maldonado (Williams) 1.39.645s
- 16. Sergio Perez (Sauber) 1.39.657s
- 17. Sebastien Buemi (Toro Rosso) 1.39.71ls

Fl Valencia Blog - Q3 in Valencia

It's the final countdown. Battling it out for supremacy in Valencia are Sebastian Vettel, Mark Webber, Lewis Hamilton, Jenson Button, Fernando Alonso, Felipe Massa, Nico Rosberg, Michael Schumacher, Nick Heidfeld, and Adrian Sutil.

And it's now all about the yellows. Tyres, not flags. With everyone out to beat Vettel to pole position, there's no choice but to use Pirelli's option tyre.

Alonso is the first man to set a timed lap, crossing the line in l.37.454s, a tenth down on Vettel's best time in Q2. Hamilton beats him with a l.37.380s, while everyone waits to see what Vettel has to offer.

Four-tenths, that's what. Vettel crosses the line in 1.36.975s, and everyone else in the pitlane weeps. It doesn't matter what FIA technical delegate Charlie Whiting does to tweak the rules, Vettel is so fast he might as well be wearing rocket-powered pants.

The session is now half-run, and the wise move is to sit pretty in the garage and save rubber. Beating Vettel to pole is nigh-on impossible, and extra sets of unused tyres is a serious boon on Sunday.

But it looks as though the opposition think they might be in with a chance – as I typed the above paragraph, everyone barring Sutil piled out onto the track. It's second-time lucky for everyone other than Schumacher and Heidfeld, both of whom need to set times. Sutil has yet to post a time, and now

won't be able to start a flying lap before the chequered flag falls.

Pirelli have said this weekend that they want the FIA to reconsider tyre allocation rules so that teams don't elect to skip out on setting a time in Q3, and with no times on the board from either Sutil or Heidfeld, both of whom elected to use the session as a siesta, there's a strong argument for saying the rules need to change, and fast.

If not, maybe the FIA should consider penalising any driver who doesn't set a timed lap in a qualifying session, and whose afternoon wasn't affected by mechanical problems or red-flags.

The clock has counted its way down to zero, and while there are still drivers out on track, pole belongs to Vettel. As it always does. The FIA should consider assigning it to him, and letting the others fight it out for P2 onwards.

Provisional grid

- l. Sebastian Vettel (Red Bull) 1.36.975s
- 2. Mark Webber (Red Bull) 1.37.163s
- 3. Lewis Hamilton (McLaren) 1.37.380s
- 4. Fernando Alonso (Ferrari) 1.37.454s
- 5. Felipe Massa (Ferrari) 1.37.535s
- 6. Jenson Button (McLaren) 1.37.645s
- 7. Nico Rosberg (Mercedes) 1.38.23ls
- 8. Michael Schumacher (Mercedes) 1.38.240s
- 9. Nick Heidfeld (Renault) NO TIME SET IN Q3
- 10. Adrian Sutil (Force India) NO TIME SET IN 03
- ll. Vitaly Petrov (Renault) 1.39.068s
- 12. Paul di Resta (Force India) 1.39.422s
- 13. Rubens Barrichello (Williams) 1.39.489s
- 14. Kamui Kobayashi (Sauber) 1.39.525s
- 15. Pastor Maldonado (Williams) 1.39.645s
- 16. Sergio Perez (Sauber) 1.39.657s
- 17. Sebastien Buemi (Toro Rosso) 1.39.71ls
- 18. Jaime Alguersuari (Toro Rosso) 1.40.232s
- 19. Heikki Kovalainen (Lotus) 1.41.664s
- 20. Jarno Trulli (Lotus) 1.42.234s
- 21. Timo Glock (Virgin) 1.42.553s
- 22. Tonio Liuzzi (HRT) 1.43.584s
- 23. Jerome D'Ambrosio (Virgin) 1.43.735s
- 24. Narain Karthikeyan (HRT) 1.44.363s

Fl Valencia Blog - Saturday press conference in Valencia

Red Bull locked out the front row this afternoon, giving credence to the team's claims that they would not be unduly affected by the engine-mapping rule tweaks. McLaren driver Lewis Hamilton, who qualified in P3, said the result was better than he or the team had expected.

The biggest item on the agenda at the post-qualifying press conference was Red Bull's confidence in their outright pace, which is unlikely to be affected by any single change to the rules.

"There was obviously a lot of talk [about the regulation revisions] beforehand going into this grand prix and there will be a lot of talk before the next grand prix," said pole-sitter Sebastian Vettel. "But everyone will lose out something. People expect us to lose more than others but that's where I disagree.

"I mean, as we touched on earlier there has been a lot of talk but for us we never really understood why," Vettel continued. "We had to focus on what we have to do here and that's it. I think we had a good qualifying session. Generally I think a good build-up throughout the weekend. Picking up steadily some pace and, in my case, I felt more and more comfortable in the car. That was most important. It is nice today to sit here and to have the front row for us so it is a good start for tomorrow but it is a long race so we will have to go from there then."

Mark Webber was asked whether he thought the off-throttle engine ban – to come into force at Silverstone – was likely to shake up the championship.

"Well, first of all I think some teams tested it a little bit in Pl, the Silverstone regulation, and I don't expect there to be a huge, huge difference tomorrow, from what we've done today, in terms of the difference between Saturday and Sunday for us.," the Australian driver said. "We've seen in the past that sometimes the results can be different and I think that could happen tomorrow, but it won't be down to... if Lewis wins by 50 seconds it's not down to the exhausts regs or the fact that he can't change the differential by a bee's dick. It's going to be down to a result that probably would have happened anyway."

The Red Bull drivers were pressed and pressed again on FIA technical delegate Charlie Whiting's recent announcement of minor revisions to the rules, and Webber wants to draw a line under the issue and focus on the racing.

"I think we've said it enough, mate," Webber said. "We came here and we didn't expect any difference. You guys wrote a lot about it, some other teams spoke a lot about it. Maybe some people in our team spoke a bit that maybe technically were not completely on top of things, but in the end we've just

got on with our job basically and we knew that it would be... if we got done here, it would be fair and square, not because of that. It was just a fair battle going into today and the results are a fair reflection of what happened today."

Given that nothing seems to slow down the Red Bulls, Hamilton was asked if he thought he could take the fight to the team tomorrow.

"Ah, that is always the question but we're as close as we can be," the McLaren driver said. "This is a track notorious for being difficult to overtake on. Since 2008 it was always hard to overtake whoever was up front, but we will see what happens. Obviously there are more pit stops here – hopefully – than we've had in the past. We've seen how the other races have unfolded, so we could still have an exciting race.

"We weren't really – at least I wasn't – expecting to be so high up," the British driver continued. "After P3 we were struggling a little trying to switch the tyres on but the guys did a great job in analysing some of the data that we have from there to improve into qualifying. Fantastic job by the guys. I think the lap wasn't too bad. Tried to improve on the last lap there but you are always trying to get a little bit more but I guess I got a bit greedy so just bailed out on the last lap and hopefully save those tyres for the race."

Webber admitted to a braking stability problem early on in this afternoon's qualifying session.

"I probably said that we changed the car quite a bit with what we can change, within qualifying: obviously front wing, brake balance and a few things like that," he said. "I wasn't happy with the car at all in Ql. We were in big trouble but we got on top of this, so thank God we managed to recover very, very well and put the car right towards the front, because after Ql I was thinking that it might be a different day tomorrow. It was most of the reason why."

As has become inevitable this year, the talk turned to tyres.

According to Vettel, there is a "big difference [between the prime and option], I would say. If you look at the lap times only, for the whole field it is somewhere in the region of one to 1.5 seconds or for some even more seconds so it is a big step. If you are in Q3 the option tyre was the favoured one as usual. But I think tomorrow for strategy and so on it will be quite interesting. Maybe we will see a different approach at different times so we will have to go from there. So first off, as I said, we need a good start and then we see where we are. You see whether you have a gap you can afford to wait a lap or not whether you have to try to pass someone but tyres are pretty far from each other."

Hamilton found that by the time qualifying rolled around, he was better able to switch on his tyres.

"I think that when we got to qualifying we managed to switch them on a little bit better," he said. "So, through the team analysing some of the data, the pressures, temperatures, all those kind of things, seemed to be able to switch them on – thank heavens, because we were struggling in practice. For us, there was almost a three-second difference from prime to option at one point. So I was quite thankful that I was able to get a decent time out of it in Ql and then, obviously on the options, they worked quite easily, they were very easy to bring in, so I'm quite happy with the pace that we had."

From his position at the head of the pack, Vettel admitted to some concern as to his potential vulnerability under Valencia's double DRS zones.

"Well it depends where you are exactly," the German driver said. "Obviously if you are in the front and the people are close enough behind then it is tricky. And it is tricky not only once, but twice here. Valencia is a street circuit but still they are quite long straights and for those two zones it will be important tomorrow to have enough of a gap or if you are behind to be close enough to try something. Both times you have a reasonable hard stop so you can try something under braking so we will see. At the moment it is not yet clear how many stops we will have and how efficient overtaking will be so we will see what happens. As I say it is a long race and it will be quite hot tomorrow."

Finally, one brave journalist asked the question a lot of us have been silently wondering...

Q. For Lewis and Mark: isn't the situation getting a little bit annoying for other drivers to be always fighting for second place? LH: No.

MW: I think that it's what it's about in Formula One, isn't it? Seb's done a good job on Saturdays for the last few years. Obviously, it was closer between him and I on Saturday (last year). This year he's on a phenomenal run, he enjoys this car and tyres and is doing a very good job. That's how it is

SV: With all respect, I think that we all fight for first. I can't expect Lewis to go into qualifying to fight for second as a target. We always want to be... everyone I think. Otherwise what is the point of going round and trying to finish fifth or second or tenth? There are no points on Saturday

Fl Valencia Blog - Charlie Whiting's press conference

On Friday evening in Valencia, FIA technical delegate Charlie Whiting made himself available to the media for a Q&A session, which – surprise, surprise – concentrated on the revised rules for engine mapping and off-throttle blown diffusers.

Below are some of the edited highlights.

Explaining the engine mapping rules, Whiting said "effectively, they are not allowed to make any changes with a computer that is plugged in, but they are allowed to change things that they can do with a switch on the steering wheel. Simply, the single ECU doesn't support certain changes from the steering wheel. Only fine adjustments can be made from the wheel. We are on the verge of issuing a note to the teams giving them a list of things they can change when they connect their computers, but it will be a very limited list. What we are basically saying is that you can't have a map in the ECU that is only good for a few laps. If you want to use it, you've got to use it for the whole race.

There had been concerns that overnight climate changes could negatively impact teams, who appeared to be locked into their Saturday setting come hell or high water. Whiting stressed that was simply not the case at all.

"We will allow certain changes to be made and have indicated to them that if there is a change in ambient temperature of more than 10 degrees we will allow them to make compensatory changes," he explained.

Responding to criticism that mid-season rule changes were unfair throughout the grid, and were a serious disadvantage for those teams operating on smaller budgets, Whiting said that the rules had not been changed.

"We haven't made any changes to the rules; all we are doing is stopping people breaking the rules," he said. "I'm a little mystified by what you say Geoff [Willis of HRT] has said because that's not my understanding of HRT's position. We had a very meaningful discussion in the Technical Working Group the other day and Geoff didn't raise any objections.

"In essence, there is nothing to prevent HRT or any other team from exploiting the use of their exhaust gases, provided that those gases are there for the genuine reasons of engine combustion, whereas a lot of the mapping that is being done is being done for purely aerodynamic reasons. That's the bit that we think is wrong. They can still exploit gases, which is what HRT were going to do in Spain, I think, but when we issued our first note just before Spain, HRT put their development on hold. Then we postponed it in light of all the questions that emerged, but we never said that we weren't going to do it. We just wanted to give teams the time to discuss it with us in the TWG, which we duly did. We've changed a few things, tried to make it a little softer, but it hasn't deviated at all from the fundamental principle."

Given that engine mapping is illegal, Whiting was asked why the FIA had not chosen to punish those teams who had been manipulating their engine maps all season long.

"Because we say that it's 'arguably' illegal," he explained. "The FIA technical department can only give an opinion. The stewards are the ones that decide whether or not the opinion of the technical department is correct. Nobody has yet challenged our opinion on this one. I think they are all happy to remove the extreme maps from their ECUs, but it's just a matter of timing and what they do without affecting any perfectly legitimate routines and systems.

"We know that exhaust gases have an influence on the aerodynamic performance of the car and we accept that, but the point is that the design should minimise the effect that the exhaust has on the car; it shouldn't attempt to use the exhaust for a completely different reason."

Interestingly, Whiting told the assembled media that none of the teams had discussed their off-throttle plans with him before the season began.

While off-throttle blown diffusers are no a definite no-no, there are still some details that need to be ironed out.

"There are a few elements that we haven't yet finalised," Whiting said. "We had meetings last night with a couple of engine manufacturers and as I said, we only want to target this illegal use of maps for aero reasons. We don't want to influence legitimate systems on the car, like engine braking for example. What we are trying to do at the moment is that if the driver comes off the throttle, zero pedal, the throttles have got to be 10 percent open at 12000rpm and 20 percent open at 18000rpm.

"Now, one engine manufacturer is asking for a little bit more, for what appear to be genuine reasons," he continued. "We have the ability to go back to 2009 and look at the maps then and if we see that, oh yes, they needed 28 percent throttle in order to achieve zero Newton Metres (torque) at 18000rpm, it's perfectly legitimate because they don't have the exhausts in the places they are now. That would therefore appear to be a perfectly reasonable request and is the sort of thing that has taken time for us to go through. Similarly, we will look at any extreme use of ignition. If you want a torque demand we will know what a team used to do in terms of fueling and ignition. If we see a clear imbalance then we will suspect it has been done for different reasons. It's such a complicated subject but we have a lot of resource being put into this and I think we'll get there in the end.

"A lot depends on engine architecture. We have to be very careful not to disadvantage, for example, users of barrel throttles versus butterfly throttles, because they have a distinctly different way of working. Those are the sorts of things that we have to be careful about. In answer to the question, yes. If it's quite clear that in 2009 one engine with a butterfly throttle only needed 15 percent opening but the same engine with a barrel throttle needed 20 percent, then we could make a distinction, because we don't want an across the board figure that will affect one team more than another."

It would not have made more sense to ban engine mapping and off-throttle blown diffusers at the end of the season, Whiting said.

The F-duct and double diffuser "were completely different," he insisted. "The double diffuser and the F-duct were legal, but during the course of the season the teams got together with us and decided they weren't needed in Fl and so we wrote rules that outlawed them. At the time though, they complied with the rules, which is why they were allowed to stay to the end of the season."

Fl Valencia Blog - New engines and the technical delegate's reports

Ten of the drivers lining up on Sunday's grid for the European Grand Prix in Valencia will be starting the race with new engines. Well, new-ish. They were used in qualifying on Saturday afternoon.

Who are the lucky ten? Red Bull drivers Mark Webber and Sebastian Vettel; McLaren drivers Lewis Hamilton and Jenson Button; Mercedes drivers Nico Rosberg and Michael Schumacher; Force India drivers Paul di Resta and Adrian Sutil; Renault's Vitaly Petrov; and Jarno Trulli of Team Lotus.

Each of the ten men who will be using new engines have previously used three, meaning that they will be half-way through their allotment for the season. No rules have been broken, and no penalties will be issued. Well, not for engine use, anyway. Who knows what will happen tomorrow?

Both Petrov and Trulli also have new gearboxes for the European Grand Prix. As they had both used their previous gearboxes for the past five rounds, no penalties were incurred for the change.

Hamilton, Sutil, Heikki Kovalainen, and Nick Heidfeld took advantage of their Montreal retirements to swap gearboxes. According to Article 28.6a of

the Sporting Regulations, "Any driver who failed to finish the race at the first, second, third or fourth of the five Events for reasons which the technical delegate accepts as being beyond the control of the team or driver, may start the following Event with a different gearbox without a penalty being incurred. A gearbox will be deemed to have been used once the car's timing transponder has shown that it has left the pit lane."

As is customary during a race weekend, the FIA's technical bods have been busy with all manner of scrutineering and inspections.

The first round of scrutineering, which took place on Thursday afternoon, saw all 24 cars assessed for conformity with the safety requirements found within the 20ll FIA Technical Regulations. All passed.

The next two rounds of scrutineering took place after each of the two Friday practice sessions. After FPI, 22 of the cars were checked to ensure they did not exceed I8,000 rpm. Only Michael Schumacher and Rubens Barrichello were exempted this inspection.

All cars other than Felipe Massa's had their fuel pressure checked. Logged pressure within the engine cooling system was checked on all the cars, and a fuel sample was taken from Sergio Perez' Sauber.

No problems occurred in the wake of the post-FPI scrutineering checks.

After FP2, Barrichello and Fernando Alonso saw their cars weighed and checked for conformity with rules relating to bodywork, overhang, width, and area. A fuel sample was taken from Trulli's Lotus, and the tyres of all cars were subject to inspection.

As with the morning inspections, the FIA did not turn up any problems with the cars inspected on Friday afternoon.

The results of Saturday's inspections have yet to be made public.

Fl Valencia Blog - The post-qualifying analysis

One of the challenges of life as an Fl journalist is coming up with new ways of saying Red Bull are fast. I imagine the era of Schumacher dominance led to similar problems in the press room. The main lesson learned from Saturday's qualifying session at the European Grand Prix is that – no matter what you do to the regulations – the RB7 is not going to slow down. But we knew that already. Adrian Newey's holistic approach to car design means that the speed comes from the machine as a whole, and not from one specific component.

That is why the other teams have struggled to match Red Bull for pace so far this season. It doesn't matter which innovations they try to incorporate into their own cars – because they lack the whole of the RB7, they lack the speed.

Which isn't to say that all hope is lost. Every hundredth of a second found in an upgrade brings the other teams slightly closer to Red Bull. Lewis Hamilton's Q3 lap was only 0.4s slower than Sebastian Vettel's charge for pole, which is a dramatic improvement since the season opened in Albert Park.

For now, though, Fernando Alonso seems to have the right idea. The Ferrari driver said this weekend that – aerodynamically-speaking – Red Bull had a two-month jump on the competition. "The development work on the car is progressing well, but we are a long way behind in terms of aerodynamics, which to put a time value on it means two or three months," Alonso said. "It will not be easy to catch up but we will do all we can to succeed."

But putting Red Bull's impressive season to one side, the real lesson to be learned from qualifying was that the FIA have been looking at the wrong rules when it comes to their recent tweaks.

While technical delegate Charlie Whiting is entirely correct to insist on a reclarification of the rules governing the use of separate engine maps for qualifying and off-throttle blown diffusers – both of which contravene existing FIA regulations – the biggest problem facing Formula l at the moment is the use of tyres in qualifying.

The fact that some teams are now choosing not to run in Q3 so that they have a free tyre choice on Sunday's grid – plus extra tyres for use in the race – is not merely an insult to those fans who tune in and turn up to watch qualifying. It is also, in this writer's opinion, a clear violation of the FIA's beloved 'spirit of the regulations'.

While he has not said so in such plain words, Pirelli motorsport director Paul Hembery appears to agree.

"We are talking with the teams about the regulations," Hembery said in Valencia on Saturday. "At the moment, if you don't set a time, for example in Q3, then you are able to choose the tyres that you start on. It means people could be saving a set of tyres because then they would be better off in the race. I've made a suggestion to put to the Sporting Working Group to say that, actually, in those circumstances, you should be made to use your Q2 tyres in that situation – so there is no advantage from not setting a time."

But Hembery's suggestion does not go far enough.

Instead, the FIA should consider implementing an automatic penalty for any driver who makes it through to Q3 but remains in the garage for the duration of the session. While it would not be fair to penalise any driver who was unable to take part in Q3 as a result of accident or injury, issuing anyone who tried to gain a tactical advantage with an automatic IO-place grid drop would ensure that we would see more running on Saturday afternoons.

It may be that the FIA needs to consider allocating teams an additional set of qualifying rubber, but given that the current motivation of motorsport's governing body appears to be to improve the show at all costs, 24 extra sets of tyres per race is hardly excessive or wasteful.

Fl Valencia Blog - The European Grand Prix as it happened

As the drivers line up on the grid for the start of the European Grand Prix, the track temperature – which has been climbing steadily all day – has already reached 45 degrees. Air temperature is a cooler 28 degrees. Pity those sweaty millionaires in the cockpit.

All of the top ten have elected to start the race on the soft tyre, and Pirelli are estimating three-stops from the bulk of the grid, thanks in no small part to the temperatures on offer today. Nick Heidfeld and Adrian Sutil have a slight advantage over the men in front; as they didn't go out in Q3, their rubber is as fresh as a daisy.

And they're off! Both Ferraris have made it past Lewis Hamilton, and Jenson Button has also carved his way up the grid. It was a good start for Nico Rosberg, who gained even more places than Button. Massa got the better start of the Ferrari pair, passing teammate Alonso with ease. But the Spanish driver had reclaimed his position in front before the end of the first lap.

Unlike the support races we've seen this weekend, there's been no first corner carnage from the Fl boys. But there is flat-spotting aplenty as the drivers are pushing hard for position. Despite the double-DRS zones and KERS, the received wisdom is that overtaking will continue to be a challenge on the Valencia street circuit.

Lap 2, and the order at the front is Vettel, Webber, Alonso, Massa, Hamilton, Rosberg, Button, Schumacher, Sutil, Heidfeld. Vettel has already pulled out a l.3s lead on his teammate, and the Ferraris are hanging on the Australian's tail.

Lap 3, and race control have activated the drag reduction systems on all cars.

Four laps in, and there's not much change in the pack. We've still got a lot of racing to go this afternoon, but it looks as though predictions of a typical Valencia parade might not have been too far off the mark. Will it all come down to pit stop strategy?

All of the action in the first few laps is coming at the back of the pack, with passes from Alguersuari and Kovalainen. Up at the front we're being teased with the promise of a battle between Rosberg and Button, but the two Mercedes-powered cars are fairly evenly matched at the moment. The DRS is what will make the difference here.

And Button does it, passing Rosberg at the end of the start/finish line at the beginning of lap 6. As the British driver passes Rosberg, Webber sets the fastest lap, still 2s behind Vettel in Pl. Alonso is ls down on Webber, with Massa l.6s further back in P4. Vettel has a l3.5s lead on Button in P6.

By lap 8, there's little change at the head of the pack. Vettel still leads, with Webber, Alonso, Massa, Hamilton, Button, Rosberg, Schumacher, Sutil, and Heidfeld behind. The top eight men come from the four teams with the most funding. Funny, that.

On lap 9, Force India tell Paul di Resta to look after his rear tyres. The Scottish driver is in Pll, 2s behind Heidfeld. Alonso has closed up on Webber, reducing the gap to 0.9s.

Pastor Maldonado pits for new tyres on lap 10, and rejoins the race in last place. Oh, the drama.

And the pit stops have begun, with Heidfeld, Barrichello, and Kobayashi joining the fray. No movement from the men in front, however. I spoke too soon. Lap 12, and Hamilton, Rosberg, and Sutil all pit from the top ten.

Revised top ten is Vettel, Webber, Alonso, Massa, Button, Hamilton, Schumacher, di Resta, Rosberg, Buemi.

Webber pits from P2 on lap l3, promoting Alonso. The Red Bull driver rejoins the race in P5. The Vettel-Alonso gap is 3.5s, and we have been denied what could have been a great battle between Webber and the Ferrari driver.

Alonso, Vettel, and Button all pit. Massa currently leads. Schumacher also joins the pits, as do di Resta and Buemi. We've got an all-new top ten on lap 14: Massa, Vettel, Alonso, Webber, Hamilton, Button, Alguersuari, Rosberg, Schumacher, Petrov.

Massa pits from the inherited lead on lap I5, and rejoins the action just ahead of Button. Petrov and Schumacher pit as a result of what the press room analysts call 'a wobbly'. You don't get high level commentary like that anywhere else! For those who weren't watching, a wobbly is when two drivers touch and one of them loses a front wing endplate.

Lap I7 and Perez takes a look at trying to reclaim his position Sutil, decides the pass isn't quite worth the trouble. Instead, he goes wheel to wheel with Heidfeld, attempting to defend his position. No dice – the Renault driver gets past. It starts off a chain reaction that sees the Mexican driver sliding further and further backwards.

The stewards are going to investigate the Schumacher-Petrov incident.

Perez is now the only driver yet to pit, which explains his inability to defend against the opposition on lap 17.

Lap 20, and the top ten are: Vettel, Webber, Alonso, Hamilton, Massa, Button, Rosberg, Sutil, Heidfeld, Barrichello. If it weren't for the fact that Alonso is closing rapidly on Webber, it looks a lot like the starting grid.

And Alonso makes it past Webber on lap 2l, pulling off the same DRS-inspired move that saw Button pass Rosberg earlier on in the race. Webber is already Is down on the Ferrari driver.

Webber appears to be having problems with his KERS - while he's got some power, he doesn't seem to be able to clear his cache every lap. Or, in more

technical speak, he can't discharge all of his stored energy.

Lap 23 and Webber goes purple. In the fastest lap sense, not the choking to death one.

Hamilton pits from P4 on lap 25, and returns to the track in P6, just behind his teammate. And one lap later, he goes purple. Despite the time lost in stops, there is a serious advantage to be had from fresh rubber this year. Much more so than with the Bridgestones.

Perez pits for the first time on lap 25; looks like Sauber are trying a one-stop strategy for their rookie at this race. He rejoins the action in Pl8.

Lap 28, and McLaren radio Hamilton to tell him to manage his tyres. So much for a glorious charge from the one driver who always goes for the gap, whether it's there or not.

Webber pits from P3, and rejoins the action in P4. Massa could be at risk from a freshly-shod Red Bull, but Ferrari's main concern is covering race leader Vettel. Sutil and Barrichello follow Webber's lead, putting from P9 and Pl0 respectively. Sutil's back out in P9, while Barrichello pops up in Pl2.

Lap 30, and Alonso pits from P2. Getting back out on track, all he can see is Webber's rear wing. There's a l.ls gap between the pair, making a DRS-powered pass a distinct possibility. But Webber goes purple, pulling out an additional 0.4s on the Ferrari driver.

Hamilton is warned about tyre management for the second time in as many laps. The first radio call told the British driver to preserve, while the second told him that the rear tyres were 'hot, very hot'. Hamilton replies that he can't go any slower. And that's why he's always such a thrill to watch. Well, as thrilling as it's possible to be around this track, anyway.

Vettel, Button, and Rosberg all pit on lap 3l. Vettel manges to hold Pl, while P4 Massa follows suit on the next lap, reemerging in P5.

This report is nothing but pit stops, I'm afraid. There's not actually much going on out on track, despite promises that the DRS would be the making of Valencia.

Lap 33 and Button radios the team to say that KERS isn't working. The McLaren system has been one of the most reliable in the paddock this season. Other than mine. Kate's Energy Recovery System, aka coffee. Always does the trick.

Time for a top ten rundown, now we're on lap 36 and not much is going on. Sure, people have pitted, but we want more from our racing. So: Vettel, Webber, Alonso, Hamilton, Massa, Button, Alguersuari, Rosberg, Sutil, Heidfeld.

Rob Smedley comes on the radio on lap 36 to tell Massa he's a second faster than the tyre-preserving Hamilton ahead. Which would be great, if there wasn't a 9.5s gap between the pair. Any battle will take a few more laps to emerge.

Lap 38, and all the action's on Twitter, not the racetrack. What did we do in Valencia before social media took off? Massa is closing the gap to Hamilton, but there's still 8.4s between the pair, so that's hardly nail-biting at the moment.

Ooh, something might be happening on lap 40! Rosberg is all over the back end of Alguersuari's Toro Rosso, and it looks as though he'll get past pretty soon. And he does!

Up in lonersville at the head of the pack, Vettel sets another fastest lap.

Seeing as there's not much going on, here's the top ten update on lap 4l: Vettel, Webber, Alonso, Hamilton, Massa, Button, Rosberg, Alguersuari, Sutil, di Resta.

Lap 43 and it looks like we're in for another round of stops as drivers prepare for the final push to the chequered flag. Webber comes in from P2 and goes out in P3, while Hamilton pits from P4 and reemerges in P5. The only real moment of drama is the Red Bull driver running wide on the pit entry, making good use of the run-off area.

Alonso manages to pass Webber as the Australian pits.

Alguersuari pits and rejoins just out of the points in Pll. In fact, lots of people are pitting. Too many to keep track of while also watching the thrilling action on track.

Lap 45 and Ferrari are readying themselves for a stop. Who's it going to be? Anyone at all? Still no one boxing for the prancing horse – are they just playing mind games? No – Alonso pits from P2, and rejoins the action in P2. Good call there from the Scuderia.

So, we've got ten laps remaining of a nail-biting European Grand Prix (maybe not...), and the top ten is: Vettel, Alonso, Webber, Massa, Button, Hamilton, Rosberg, Alguersuari, Sutil, Heidfeld. I probably could have copied and pasted that from further up this piece. But I didn't.

Vettel pits from the lead with a 28.4s gap to Alonso. Unless something goes wrong, he should hold that lead. Smooth stop, and Vettel is back out in front, where he always is.

Massa and Button pit on lap 49. The Brazilian makes it back out in P5, while the Brit is in P6. Given the wealth of overtaking we've seen this afternoon, their fresh rubber is sure to make for a thrilling fight to the flag. </sarcasm>

We're down to the final five laps and there's still not much going on. Vettel leads Alonso, Webber, Hamilton, Massa, Button, Rosberg, Alguersuari, Sutil, and Heidfeld. With a few changes at the bottom end, that was the order at the end of the first lap.

It's the penultimate lap in what can only be described as an old-skool procession, and the top ten are in the same positions they were last time I looked.

There aren't any gaps that make a last-minute pass look even remotely possible, and we're unlikely to see any changes unless martians zap a couple of drivers up into their UFOs for some probing action.

Where are you, martians?

Nowhere. The race finished with no significant changes, and Vettel took the win. The main point of note is that Narain Karthikeyan has entered the Fl record books as the first man to be a classified finisher in P24.

European Grand Prix results

- 1. Sebastian Vettel (Red Bull) 25 points
- 2. Fernando Alonso (Ferrari) 18 pts
- 3. Mark Webber (Red Bull) 15 pts
- 4. Lewis Hamilton (McLaren) 12 pts
- 5. Felipe Massa (Ferrari) 10 pts
- 6. Jenson Button (McLaren) 8 pts
- 7. Nico Rosberg (Mercedes) 6 pts
- 8. Jaime Alguersuari (Toro Rosso) 4 pts
- 9. Adrian Sutil (Force India) 2 pts
- 10. Nick Heidfeld (Renault) 1 pt
- ll. Sergio Perez (Sauber)
- 12. Rubens Barrichello (Williams)
- 13. Sebastien Buemi (Toro Rosso)
- 14. Paul di Resta (Force India)
- 15. Vitaly Petrov (Renault)
- 16. Kamui Kobayashi (Sauber)
- 17. Michael Schumacher (Mercedes)
- 18. Pastor Maldonado (Williams)
- 19. Heikki Kovalainen (Lotus)
- 20. Jarno Trulli (Lotus)
- 2l. Timo Glock (Virgin)
- 22. Jerome D'Ambrosio (Virgin)
- 23. Tonio Liuzzi (HRT)
- 24. Narain Karthikeyan (HRT)

Drivers' championship standings

- 1. Sebastian Vettel 186 pts
- 2. Jenson Button 109 pts
- 3. Mark Webber 109 pts
- 4. Lewis Hamilton 97 pts
- 5. Fernando Alonso 87 pts
- 6. Felipe Massa 42 pts
- 7. Nico Rosberg 32 pts
- 8. Vitaly Petrov 31 pts
- 9. Nick Heidfeld 30 pts
- 10. Michael Schumacher 26 pts
- ll. Kamui Kobayashi 25 pts
- 12. Adrian Sutil 10 pts
- 13. Jaime Alguersuari 8 pts
- 14. Sebastien Buemi 8 pts
- 15. Rubens Barrichello 4 pts
- 16. Sergio Perez 2 pts
- 17. Paul di Resta 2 pts
- 18. Pedro de la Rosa 0 pts
- 19. Jarno Trulli O pts
- 20. Tonio Liuzzi 0 pts
- 21. Jerome D'Ambrosio O pts
- 22. Heikki Kovalainen 0 pts
- 23. Timo Glock 0 pts
- 24. Pastor Maldonado O pts
- 25. Narain Karthikeyan Opts

Constructors' championship standings

- l. Red Bull Racing 295 points
- 2. McLaren 206 pts
- 3. Ferrari 129 pts
- 4. Renault 61 pts
- 5. Mercedes 58 pts
- 6. Sauber 27 pts 7. Toro Rosso – 16 pts

8. Force India – 12 pts 9. Williams – 4 pts 10. Team Lotus – 0 pts 11. HRT – 0 pts 12. Virgin Racing – 0 pts

Fl Valencia Blog - Sunday press conference in Valencia

The post-race press conference at Valencia's European Grand Prix saw Sebastian Vettel (Red Bull), Fernando Alonso (Ferrari), and Mark Webber (Red Bull) lining up to face the media.

Race-winner Vettel was asked to give his opinion on the new Pirelli medium compound, which saw its first running in race conditions on Sunday afternoon.

"To be honest I think Mark was maybe the first of our group to change onto the hard tyre." he said. "I saw him going in the pits, exit of the last corner, and then I was asking by radio what is his pace as we all didn't know really how quick the warm-up will be. I think, generally, the warm-up is fine but is it strong enough to beat a used set of options, and we realised he wasn't able to do the usual step you see on new tyres because the medium tyre is probably slower."

Despite losing second place to Alonso, Webber has some positives to take away from the afternoon.

"I think there are a lot of positives from this race for me," he said. "It was a clean, straight fight at the front for the first time since Turkey, probably, not having any real hiccups in either qualifying or the first lap or something like that. There wasn't a huge amount between all three of us, I think all of us were pushing as hard as we could, but also nursing the tyres, getting as far as we could on the tyres. So it was nice, for a change, to always have Seb in sight, that's the first thing, so he was certainly there and Red Bull's stops were obviously always close together.

"I'm disappointed myself," Webber continued. "At the end I probably pitted a bit too early on the last one, because the warning on the option was pretty quick in terms of if you needed to pit, so I was a bit worried about Fernando coming underneath us but the big question mark was how was this tyre going to perform in the first eight sectors of its life? And it turned out it was marginal against a used option. It was just trying to get the car going on that compound so in the end, that was my call, so no fault of the team, at all.

"I think it was probably my best race of the year to be honest up until the last pit stop," he concluded. "It was quite close with all three of us. We are trying to go as fast as possible while managing the tyres at the same time. It is always the same these days. I was very, very happy with how the race was going until the last stop. It was my fault basically not the team's. I was worried about Fernando coming underneath me around the stops and it was not really known how the medium tyre would perform on the out lap. For sure, it is not as good as the soft but is it better than an old soft? That was the risk I decided to take. I lost out. Fernando stayed out for a few more laps and also I came out behind a little bit of traffic so my fault we missed second today and Fernando drove a good race. All three of us were nip and tuck all the way to the end. At the end the gearbox was playing up. We had to back right off but we had a massive gap to McLaren, they were one sector behind at least if not two, so we could cruise to the end and look after the gearbox."

Asked whether he was going to take it easy for a while, given his solid championship lead, Vettel said he doesn't play the numbers game.

"Not really," he said, "I don't look at the gap. It is a long season. We have had a phenomenal start to the season and to continue that way is our target. But we have to go step-by-step and take every single race as it comes. Surely we don't have to win by taking too much risks but the target is to win races. It feels wonderful as I say today and we try always to achieve our optimum. If we have a chance to win then we have to take it. If the day comes and we might struggle and not be competitive enough and the car is only maybe good enough for third then we have to finish third and not seventh. It is still a long way. At the moment we all enjoy. It is incredible the achievement and the step the team has made in the last two-and-a-half years, every single department has got so much more professional, the reaction to mistakes. The amount of things we learn and the step we make forward is incredible. We have to keep doing what we do and stay hungry, wanting to win races and wanting to become better and better every time."

Worryingly for the competition, Webber thinks that the Valencia street circuit is one of Red Bull's weakest circuits.

"I think this is probably our weakest track of the year, maybe, so we didn't do too badly today on a very weak track," the Australian driver said. "We have a different regulation from Silverstone onwards and we expect that we can still be pretty competitive again. If we can keep Valencia as one of our weakest, definitely our top three weakest tracks, we didn't do too badly today, so we should go okay on the other ones."

But for Alonso, victory is the only option - Ferrari's passionate tifosi except nothing less.

"We all in Scuderia Ferrari Marlboro know that our tifosi are expecting us to win," the Spanish driver said. "At the moment we are not in that position, but we are getting much closer. In the first three or four races of the championship we were on average L5 seconds in qualifying behind Red Bull, now we are on average six or seven tenths so we have closed by half the gap. But it is still another half. We will never stop working until we reach first position in terms of performance of the car so they can be very calm about our effort that it will be always 100 per cent.

"I think we need to be realistic knowing that our pace now is not enough to win races or be on pole position," he continued. "But there is a clear trend, a clear direction that is moving forward and we did some good steps in the car. We were, as I said in the press conference, I.5 seconds on average in the first three or four races of the championship. Now maybe we have halved the gap. We need to wait for Silverstone, Nurburgring, circuits that are more normal circuits, not only straights and big braking."

Alonso admitted that Ferrari were having problems this season.

"But we are confident that we have understood our problems," he said. "The wind tunnel problems we had at the beginning of the year so now all the parts we put on the car, all the ideas that we have, we know now they are working so that is definitely a positive thing. What we can do on the track side, drivers, engineers, mechanics, is to deliver. It is to do clean races with no mistakes, good starts, good strategy as we see today. I know there was a lot of criticism about the strategy in Canada, putting on the intermediate tyres and then it rained. But I think that is more bad luck than wrong strategy. In terms of strategy today we did very well. We overtook one Red Bull at the end and hopefully that will be in the papers tomorrow as well."

Asked what the Scuderia's biggest problem was, Alonso replied: "Aerodynamics. I don't think that it's a secret what we are lacking. What Formula I needs these days is aero performance. We can be more or less competitive in these circuits where there are not high speed corners with heavy braking on the straights. The tyres are the same for everybody, brakes are no different, engines are more or less the same, KERS we all use, so it's all about aerodynamics. As I said, these days everybody knows about our problems during the winter and we were putting parts on the car which didn't make the car quicker, slower and when we realised that was Malaysia. Now we are a couple of months behind."

Despite Ferrari's poor start to the season, Alonso is pleased with the team's recent progress.

"Tm happy with the performance and the team moving forward from a difficult start to the season," he said. "Obviously the championship is not in our calculations at the moment, so not in our hands, so we need to do it race by race, try to win the races we go to and wait for some mistakes from Red Bull. At the moment, I don't think we can think of the championship in a proper way. We just need to take it race by race and see what happens in the last part of the season. The distance now with 99 points, a hundred or whatever, is a lot so it's not in our hands. At the moment, as we said, we're one second behind, or eight tenths behind so if anyone thinks we can win a championship being eight tenths behind it's because maybe they don't understand Formula I."

But it wasn't all gloom and doom from the man in red, who gave a cheeky response to a question about his sense of achievement on Sunday afternoon.

"First podium in Valencia," the Ferrari driver said. "I missed this trophy. At home I have trophies from all Formula I circuits I race apart from Abu Dhabi and India, obviously we race there this year, so now that I have here in Valencia obviously Abu Dhabi and India will be the next target to complete the collection."

Finally, Alonso appears to have been watching a completely different race to the one the rest of us saw: "I think an interesting race for the fans, for the people on TV to see the fight with Webber all the race through."

Vettel had a slightly more realistic view of proceedings, despite his emotional response to the win over the team radio.

"Maybe from the outside I don't know how much there was happening in the grand prix," the German driver said. "But maybe from the outside. At least for myself it looked like a boring race but I tell you I enjoy it so much when it is between you and the car every single lap."

Fl Valencia Blog - Analysing the European Grand Prix

What can you say about a race in which very little happened? On Sunday night in Valencia, the press room was filled with journalists brainstorming ways of filling hundreds of words to describe a lights to flag win that saw little in the way of action.

We celebrated Narain Karthikeyan entering the Fl record books as the first man to be a classified finisher in P24; we noted that this was only the third time in Fl history that all starters finished a race (four, if you include the dubious 2005 U.S. Grand Prix); and we worked out that Sebastian Vettel would almost certainly be the sport's youngest double world champion.

Presuming, that is, that he doesn't spend the next few races making lots of errors and banging into things. Because with a 77-point lead in the drivers' standings, Vettel would need to retire from three races all won by either Jenson Button or Mark Webber to turn the 20ll world championship into a two-horse race.

And given the seemingly bulletproof reliability of the RB7 – KERS aside – and Vettel's measured performances thus far, that doesn't seem highly likely...

What else can you say about the Valencia race? There wasn't any real drama on track at any point in the afternoon. We saw a great start and first lap, as the Ferraris carved up the field and started challenging the Red Bulls; we saw Button make a great DRS-powered pass on Nico Rosberg after he was passed at the start; and Michael Schumacher and Vitaly Petrov had a brief moment of minor contact that ruined the German's afternoon.

Sergio Perez pulled off a one-stop strategy but was unable to make it pay dividends in points, while Jaime Alguersuari drove brilliantly from Pl8 to P8, thanks to a two-stop strategy which saw the young Spanish driver complete an impressive 23 laps on the soft tyre.

And that was about it.

Sure, there were points where it looked as though Mark Webber and Fernando Alonso were getting ready to tango, or where Alonso might have been in the position to challenge Vettel, but then drivers pitted, or gaps were pulled out, and the anticipation came to naught.

So what did we learn from Valencia? There was a lot of talk from journalists (including me) in the run-up to the race, anticipating real action on the street circuit for the first time in its history. Thanks to the combination of DRS and Pirelli's brave decision to supply Formula I with disintegrating rubber, we have been spoiled so far this season. We've had brilliant racing at normally dull tracks, and the Montreal monsoon turned the 2011 Canadian Grand Prix into a race that will surely go down as one of the best in living memory.

With hot track temperatures, a circuit that traditionally rubbers in well over the course of the weekend, two DRS zones, and Pirelli tyres, it was

assumed that Valencia would see overtaking, and lots of it. The support races offered thrills, spills, and passes, and we hoped that Formula l would be more of the same.

Instead, we had a Sunday afternoon parade of the sort we see in Valencia every year.

What we learned from that is that the circuit needs to change. The current configuration is incapable of delivering good racing for Formula l cars. And as the cars aren't going to change, the track has to.