# F1 | BRAKE CIRCUIT IDENTITY CARDS 

27-29 MAY 2016

## CIRCUIT DE MONACO <br> (MONTE CARLO)



## CIRCUIT DATA

Length: 3,340 m
Number of laps: 78
Number of brake zones/lap: 13

## COMMENT

This is a historic city circuit that winds through the streets of the Principality and can create many problems for the single-seater brakes. In fact, the winding track with poor grip often means that the drivers need to control the car often using the brakes, with negative reflexes on the caliper and brake fluid temperature. In the past this event has often been a theatre of problems connected to overheating and vapour lock of the braking system (a phenomenon in which the brake fluid reaches the boiling point inside the caliper), leading to a lengthening of the pedal in braking which has many times caused drivers to retire, if not crash. In our day and age the progress made in cooling the brakes has held these problems at bay, although particular attention still needs to be given to managing temperatures during the race weekend. The braking sections are not particularly sudden, but the time spent on the brakes here is among the highest of the season at $26 \%$.

* Turn 10 is considered the most demanding for the braking system.


| O1 |  |  |
| :--- | :--- | :--- |
| Initial speed | 293 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 101 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 118 | $(\mathrm{~m})$ |
| Braking time | 1.38 | $(\mathrm{sec})$ |
| Maximum deceleration | 4.5 | $(\mathrm{~g})$ |
| Maximum pedal load | 140 | $(\mathrm{Kg})$ |
| Braking power | 1773 | $(\mathrm{Kw})$ |


| O4 |  |  |
| :--- | :--- | :--- |
| Initial speed | 174 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 113 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 23 | $(\mathrm{~m})$ |
| Braking time | 0.79 | $(\mathrm{sec})$ |
| Maximum deceleration | 2.2 | $(\mathrm{~g})$ |
| Maximum pedal load | 67 | $(\mathrm{Kg})$ |
| Braking power | 401 | $(\mathrm{Kw})$ |


| O6 |  |  |
| :--- | :--- | :--- |
| Initial speed | 144 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 50 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 74 | $(\mathrm{~m})$ |
| Braking time | 1.30 | $(\mathrm{sec})$ |
| Maximum deceleration | 1.8 | $(\mathrm{~g})$ |
| Maximum pedal load | 55 | $(\mathrm{Kg})$ |
| Braking power | 192 | $(\mathrm{Kw})$ |

## 08

| Initial speed | 120 | $(\mathrm{Km} / \mathrm{h})$ |
| :--- | :--- | :--- |
| Final speed | 97 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 21 | $(\mathrm{~m})$ |
| Braking time | 0.78 | $(\mathrm{sec})$ |
| Maximum deceleration | 1.5 | $(\mathrm{~g})$ |
| Maximum pedal load | 41 | $(\mathrm{Kg})$ |
| Braking power | 54 | $(\mathrm{Kw})$ |

## 11

| Initial speed | 69 | $(\mathrm{Km} / \mathrm{h})$ |
| :--- | :--- | :--- |
| Final speed | 61 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 19 | $(\mathrm{~m})$ |
| Braking time | 0.79 | $(\mathrm{sec})$ |
| Maximum deceleration | 1.0 | $(\mathrm{~g})$ |
| Maximum pedal load | 42 | $(\mathrm{Kg})$ |
| Braking power | 117 | $(\mathrm{Kw})$ |


| 03 |  |  |
| :--- | :--- | :--- |
| Initial speed | 290 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 146 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 88 | $(\mathrm{~m})$ |
| Braking time | 1.04 | $(\mathrm{sec})$ |
| Maximum deceleration | 4.4 | $(\mathrm{~g})$ |
| Maximum pedal load | 136 | $(\mathrm{Kg})$ |
| Braking power | 1715 | $(\mathrm{Kw})$ |

05

| Initial speed | 226 | $(\mathrm{Km} / \mathrm{h})$ |
| :--- | :--- | :--- |
| Final speed | 65 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 105 | $(\mathrm{~m})$ |
| Braking time | 1.46 | $(\mathrm{sec})$ |
| Maximum deceleration | 3.1 | $(\mathrm{~g})$ |
| Maximum pedal load | 99 | $(\mathrm{Kg})$ |
| Braking power | 891 | $(\mathrm{Kw})$ |


| O7 |  |  |
| :--- | :--- | :--- |
| Initial speed | 96 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 85 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 17 | $(\mathrm{~m})$ |
| Braking time | 0.69 | $(\mathrm{sec})$ |
| Maximum deceleration | 1.2 | $(\mathrm{~g})$ |
| Maximum pedal load | 25 | $(\mathrm{Kg})$ |
| Braking power | 99 | $(\mathrm{Kw})$ |

10*

| Initial speed | 297 | $(\mathrm{Km} / \mathrm{h})$ |
| :--- | :--- | :--- |
| Final speed | 70 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 137 | $(\mathrm{~m})$ |
| Braking time | 1.67 | $(\mathrm{sec})$ |
| Maximum deceleration | 4.6 | $(\mathrm{~g})$ |
| Maximum pedal load | 142 | $(\mathrm{Kg})$ |
| Braking power | 1828 | $(\mathrm{Kw})$ |


| $\mathbf{1 2}$ |  |  |
| :--- | :--- | :--- |
| Initial speed | 234 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 151 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 61 | $(\mathrm{~m})$ |
| Braking time | 0.86 | $(\mathrm{sec})$ |
| Maximum deceleration | 3.3 | $(\mathrm{~g})$ |
| Maximum pedal load | 104 | $(\mathrm{Kg})$ |
| Braking power | 980 | $(\mathrm{Kw})$ |

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* Turn 10 is considered the most demanding for the braking system.


| 15 |  |  |
| :--- | :--- | :--- |
| Initial speed | 237 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 89 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 84 | $(\mathrm{~m})$ |
| Braking time | 1.10 | $(\mathrm{sec})$ |
| Maximum deceleration | 3.3 | $(\mathrm{~g})$ |
| Maximum pedal load | 103 | $(\mathrm{Kg})$ |
| Braking power | 1010 | $(\mathrm{Kw})$ |


| 18 |  |  |
| :--- | :--- | :--- |
| Initial speed | 58 | $(\mathrm{Km} / \mathrm{h})$ |
| Final speed | 90 | $(\mathrm{~m})$ |
| Stopping distance | 1.33 | $(\mathrm{sec})$ |
| Braking time | 2.5 | $(\mathrm{~g})$ |
| Maximum deceleration | 76 | $(\mathrm{Kg})$ |
| Maximum pedal load | 552 | $(\mathrm{Kw})$ |
| Braking power |  |  |

## 19

| Initial speed | 114 | $(\mathrm{Km} / \mathrm{h})$ |
| :--- | :--- | :--- |
| Final speed | 91 | $(\mathrm{Km} / \mathrm{h})$ |
| Stopping distance | 43 | $(\mathrm{~m})$ |
| Braking time | 0.80 | $(\mathrm{sec})$ |
| Maximum deceleration | 1.4 | $(\mathrm{~g})$ |
| Maximum pedal load | 40 | $(\mathrm{Kg})$ |
| Braking power | 35 | $(\mathrm{Kw})$ |

