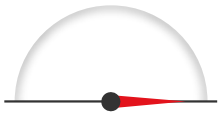
F1 | BRAKE CIRCUIT IDENTITY CARDS

2016 FORMULA 1 GRAND PRIX DU CANADA

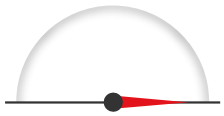
10-12 JUN 2016

CIRCUIT GILLES-VILLENEUVE (MONTRÉAL)

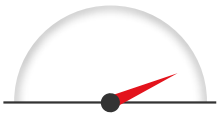


AVERAGE DECELERATION
4.3 g

ENERGY DISSIPATED
149 kWh



BRAKE CATEGORIZATION
HARD



TIME SPENT BRAKING
19 %

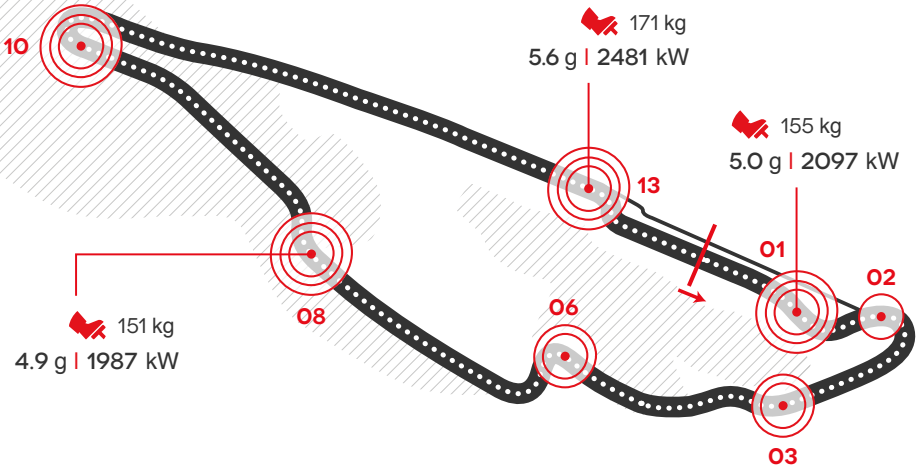
CIRCUIT DATA

Length: 4,361 m
Number of laps: 70
Number of brake zones/lap: 7

COMMENT

Montreal is without a shadow of a doubt the most demanding test bench for the single-seater braking systems.
It is a "stop and go" type circuit characterised by sudden braking sections and acceleration. The braking sections, all hard and very close together, determine an extremely high operating temperature for the discs and pads which do not have time to cool sufficiently in the short straight stretches.
These characteristics, combined with a significantly high percentage of time spent on the brakes, determine a very hard mix for the braking systems, also due to the fact that the aerodynamic load (in other words, the resistance to forward progress) is not one of the highest.The scenario can get even worse when there is a tail wind on the two main straight stretches which can significantly increase the straight line speed, putting the brakes to an even more severe test.
A critical point is the chicane before the famous "wall of champions" where control going into the turn is fundamental to avoid hopping the kerb. On this turn an excellent feeling with the brakes can make the difference between a good time and retiring with a crash!

*** Turn 13 is considered the most demanding for the braking system.**



01

Initial speed	313	(Km/h)
Final speed	128	(Km/h)
Stopping distance	103	(m)
Braking time	1.21	(sec)
Maximum deceleration	5.0	(g)
Maximum pedal load	155	(Kg)
Braking power	2097	(Kw)

02

Initial speed	133	(Km/h)
Final speed	71	(Km/h)
Stopping distance	59	(m)
Braking time	1.04	(sec)
Maximum deceleration	1.6	(g)
Maximum pedal load	57	(Kg)
Braking power	178	(Kw)

03

Initial speed	263	(Km/h)
Final speed	123	(Km/h)
Stopping distance	83	(m)
Braking time	1.03	(sec)
Maximum deceleration	3.9	(g)
Maximum pedal load	122	(Kg)
Braking power	1356	(Kw)

06

Initial speed	280	(Km/h)
Final speed	96	(Km/h)
Stopping distance	113	(m)
Braking time	1.34	(sec)
Maximum deceleration	4.3	(g)
Maximum pedal load	133	(Kg)
Braking power	1593	(Kw)

08

Initial speed	306	(Km/h)
Final speed	108	(Km/h)
Stopping distance	118	(m)
Braking time	1.33	(sec)
Maximum deceleration	4.9	(g)
Maximum pedal load	151	(Kg)
Braking power	1987	(Kw)

10

Initial speed	302	(Km/h)
Final speed	60	(Km/h)
Stopping distance	140	(m)
Braking time	1.70	(sec)
Maximum deceleration	4.8	(g)
Maximum pedal load	148	(Kg)
Braking power	1933	(Kw)

13*

Initial speed	335	(Km/h)
Final speed	122	(Km/h)
Stopping distance	121	(m)
Braking time	1.28	(sec)
Maximum deceleration	5.6	(g)
Maximum pedal load	171	(Kg)
Braking power	2481	(Kw)