F1 | BRAKE CIRCUIT IDENTITY CARDS

FORMULA 1 GRAND PRIX DU CANADA 2015

05-07 JUN 2015

CIRCUIT GILLES-VILLENEUVE (MONTRÉAL)

TYPE OF CIRCUIT	**HARD**
TIME SPENT BRAKING	**19%**
AVERAGE DECELERATION	**4.3** g
BRAKING ENERGY PRODUCED BY A CAR DURING THE GP	**147** kWh
TOTAL PEDAL LOAD DURING THE GP	**65,590** Kg

HARDER BRAKING

	STOPPING DISTANCE	MAXIMUM PEDAL LOAD
13	122 m	171 Kg
01	105 m	155 Kg
08	120 m	151 Kg

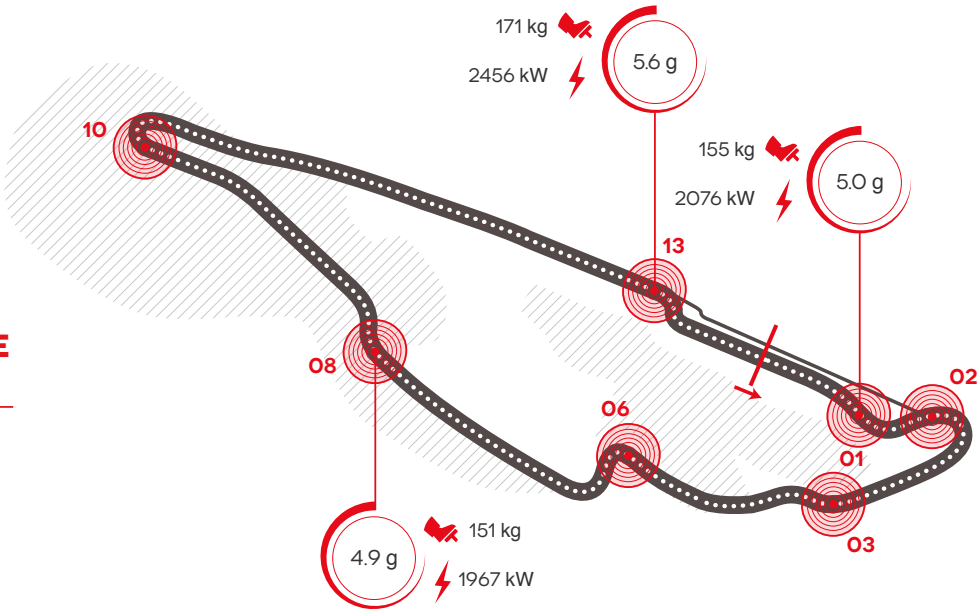
CIRCUIT DATA

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	308	(Km/h)
Final speed	126	(Km/h)
Stopping distance	105	(m)
Braking time	1.22	(sec)
Maximum deceleration	5.0	(g)
Maximum pedal load	155	(Kg)
Braking power	2076	(Kw)

02

Initial speed	131	(Km/h)
Final speed	70	(Km/h)
Stopping distance	60	(m)
Braking time	1.04	(sec)
Maximum deceleration	1.6	(g)
Maximum pedal load	57	(Kg)
Braking power	176	(Kw)

03

Initial speed	259	(Km/h)
Final speed	121	(Km/h)
Stopping distance	83	(m)
Braking time	1.04	(sec)
Maximum deceleration	3.9	(g)
Maximum pedal load	122	(Kg)
Braking power	1343	(Kw)

06

Initial speed	276	(Km/h)
Final speed	94	(Km/h)
Stopping distance	114	(m)
Braking time	1.35	(sec)
Maximum deceleration	4.3	(g)
Maximum pedal load	133	(Kg)
Braking power	1577	(Kw)

08

Initial speed	301	(Km/h)
Final speed	107	(Km/h)
Stopping distance	120	(m)
Braking time	1.34	(sec)
Maximum deceleration	4.9	(g)
Maximum pedal load	151	(Kg)
Braking power	1967	(Kw)

10

Initial speed	298	(Km/h)
Final speed	59	(Km/h)
Stopping distance	141	(m)
Braking time	1.71	(sec)
Maximum deceleration	4.8	(g)
Maximum pedal load	148	(Kg)
Braking power	1914	(Kw)

13*

Initial speed	330	(Km/h)
Final speed	120	(Km/h)
Stopping distance	122	(m)
Braking time	1.29	(sec)
Maximum deceleration	5.6	(g)
Maximum pedal load	171	(Kg)
Braking power	2456	(Kw)