



F1 | BRAKE CIRCUIT IDENTITY CARDS

FORMULA 1 GRAND PRIX
DU CANADA 2015

05-07 JUN 2015

CIRCUIT GILLES-VILLENEUVE (MONTREAL)

TYPE OF CIRCUIT	HARD
TIME SPENT BRAKING	19%
AVERAGE DECELERATION	4.3 g
BRAKING ENERGY PRODUCED	147 kWh
TOTAL PEDAL LOAD DURING THE GP	144601 Kg

HARDER BRAKING

	STOPPING DISTANCE	MAXIMUM PEDAL LOAD
13	401 ft	376 lbsf
01	343 ft	342 lbsf
08	392 ft	333 lbsf

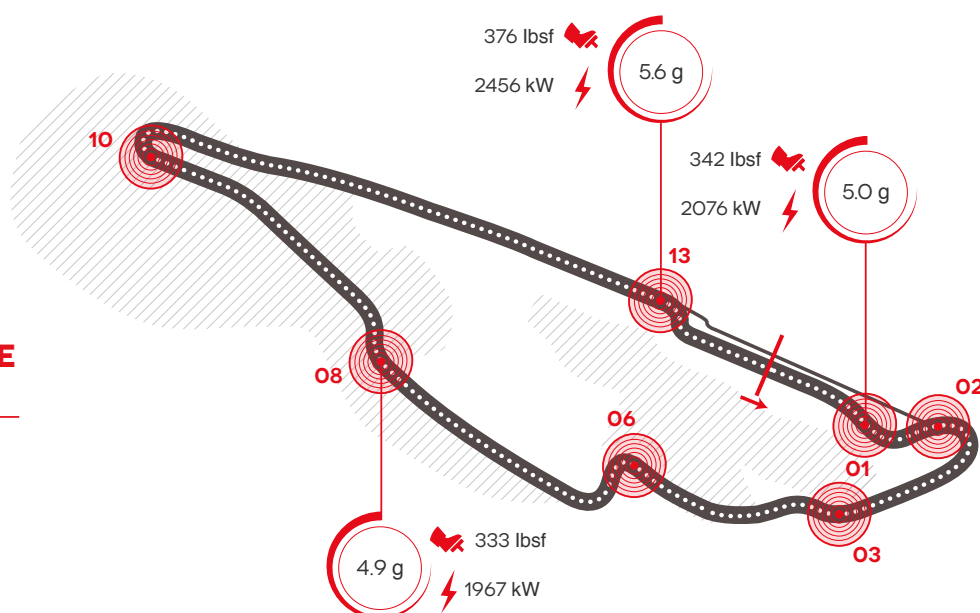
CIRCUIT DATA

Length: 2,710 miles
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

Entry speed	191	(Mph)
Exit speed	78	(Mph)
Braking distance	343	(ft)
Braking time	1.22	(sec)
Maximum deceleration	5.0	(g)
Maximum pedal load	342	(lbsf)
Braking power	2076	(Kw)

02

Entry speed	81	(Mph)
Exit speed	44	(Mph)
Braking distance	197	(ft)
Braking time	1.04	(sec)
Maximum deceleration	1.6	(g)
Maximum pedal load	125	(lbsf)
Braking power	176	(Kw)

03

Entry speed	161	(Mph)
Exit speed	75	(Mph)
Braking distance	274	(ft)
Braking time	1.04	(sec)
Maximum deceleration	3.9	(g)
Maximum pedal load	270	(lbsf)
Braking power	1343	(Kw)

06

Entry speed	171	(Mph)
Exit speed	58	(Mph)
Braking distance	373	(ft)
Braking time	1.35	(sec)
Maximum deceleration	4.3	(g)
Maximum pedal load	294	(lbsf)
Braking power	1577	(Kw)

08

Entry speed	187	(Mph)
Exit speed	66	(Mph)
Braking distance	392	(ft)
Braking time	1.34	(sec)
Maximum deceleration	4.9	(g)
Maximum pedal load	333	(lbsf)
Braking power	1967	(Kw)

10

Entry speed	185	(Mph)
Exit speed	37	(Mph)
Braking distance	464	(ft)
Braking time	1.71	(sec)
Maximum deceleration	4.8	(g)
Maximum pedal load	327	(lbsf)
Braking power	1914	(Kw)

13*

Entry speed	205	(Mph)
Exit speed	75	(Mph)
Braking distance	401	(ft)
Braking time	1.29	(sec)
Maximum deceleration	5.6	(g)
Maximum pedal load	376	(lbsf)
Braking power	2456	(Kw)