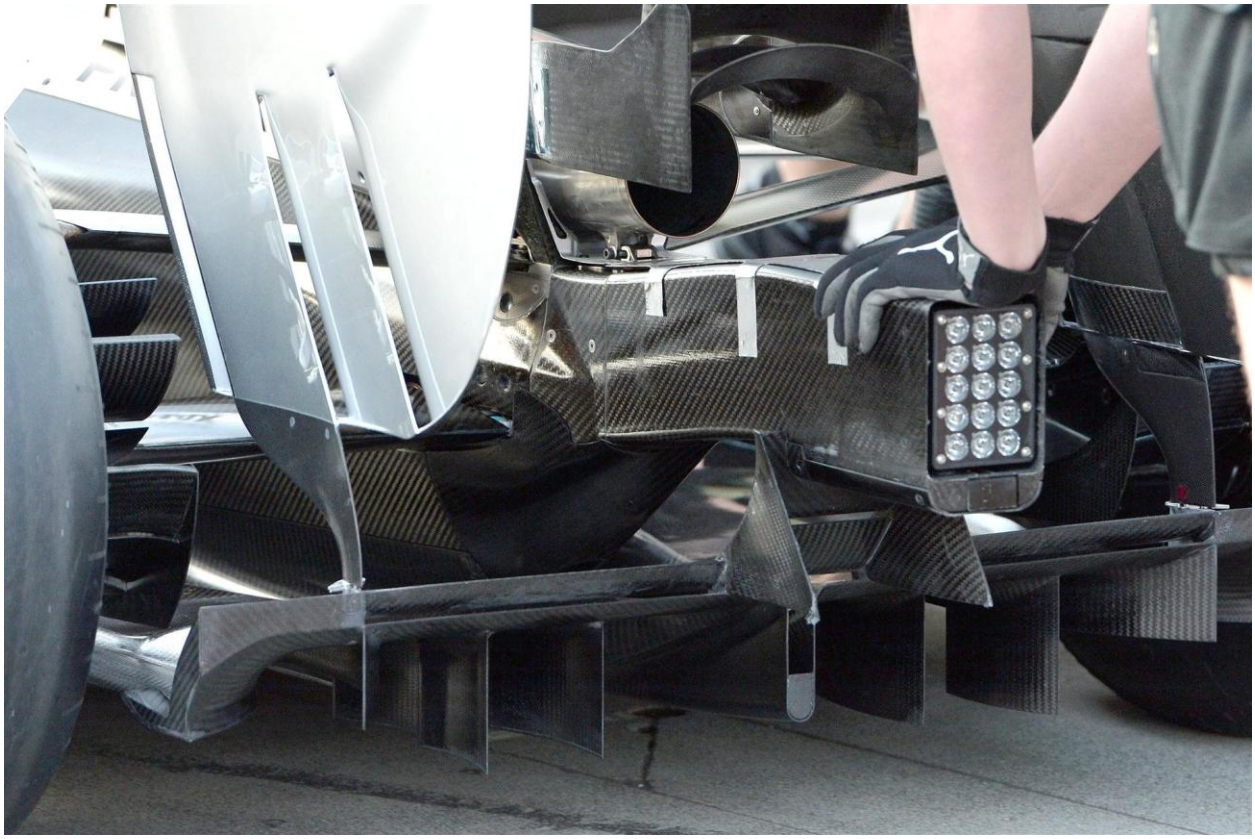
AERO 101

Hello, and welcome to the twelfth segment of Aero 101. This is the first segment where we answer questions posed by you, our followers! Last week, Tyler Durten asked us what a monkey seat was on the current Formula 1 cars. We'll describe their purpose and how beneficial they are here.

The monkey seat winglet, formerly known as the Y100 winglet, sits right above the exhaust. As you may know, the 2014 regulations state that the cars can only have one central exhaust and the location and angle is fixed. Formerly, exhaust gases were used in blown diffuser systems and even to blow winglets on the suspension arms. To tighten up on the exploitation of the rules, the FIA chose to move the exhaust to a neutral zone.

The exhaust gas flows and is encouraged by the monkey seat winglet to follow an upward path. The winglet is placed in such a location so that the gases flow towards the center section of the rear wing. As we know from before, wings have a certain angle in which they stall. As the exhaust gases flow from the monkey seat winglet to the underside of the rear wing, they encourage the airflow to remain attached (similar to what a vortex does to airflow). Because of this, teams can run larger wing angles to gain more downforce. The winglets themselves may create some downforce as well. Winglet shapes differ from straight, to arched.



Source: thewptformula.com