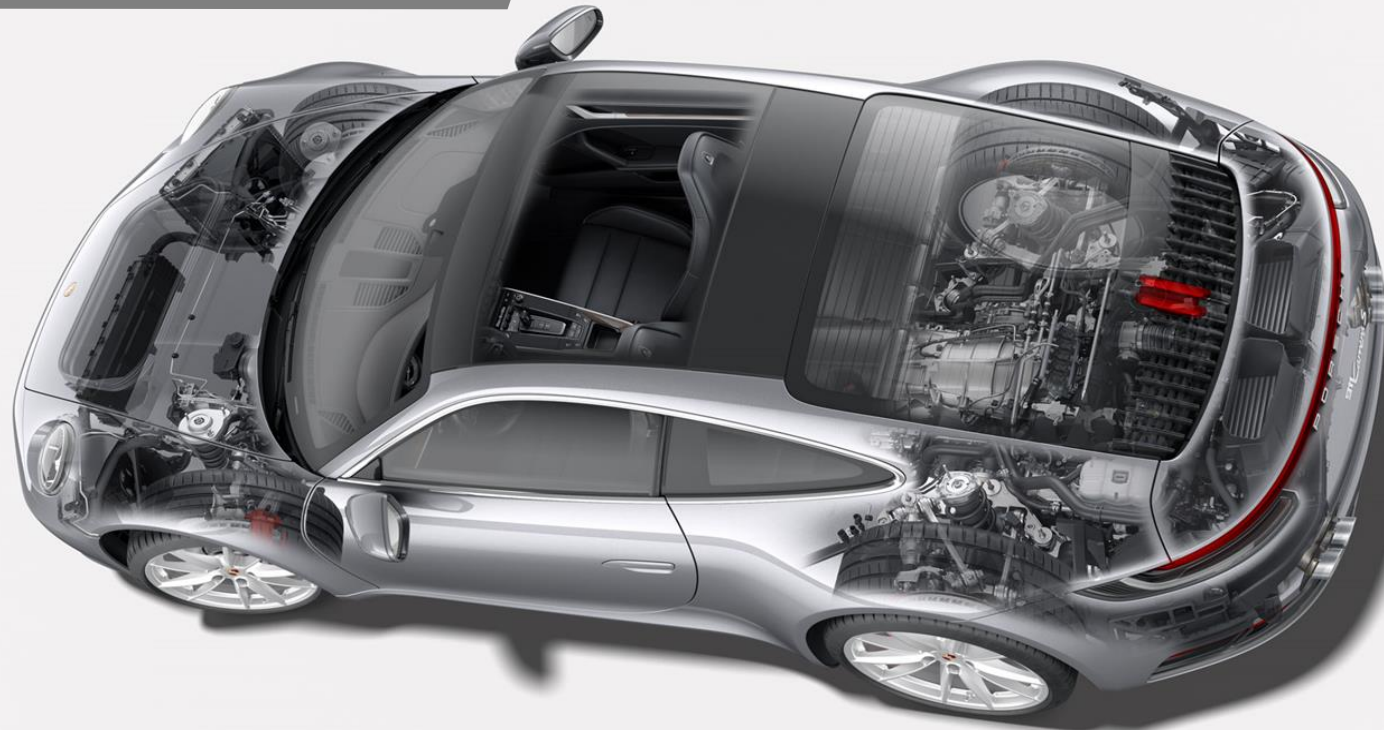


PORSCHE

The new 911 Carrera Technology & Production Workshop Plant Quality



PORSCHE

The new 911 Carrera – Interior acoustics (squeak and rattle)



Complete vehicle analysis – Acoustics

High-power shaker

High-power shaker



Analysis tool for all series
Squeak and rattle noises



Direct car body excitation
Vibration stimulation via skid recordings



Reproducible excitation techniques
100% iteration of real race/test tracks



Effective vehicle analyses
With no test drive / environmental or CO₂ influences



Quiet test bench operation with no side noise
Noise analyses without any ambient/engine noises



Goal: Ensuring quality customer experience
in relation to annoying noises when driven /
in customer use



Methodology

01

Measurements of real body vibrations on any test/race track using sensors.

02

Transfer of track profile as a control parameter to the high-power shaker's control unit.

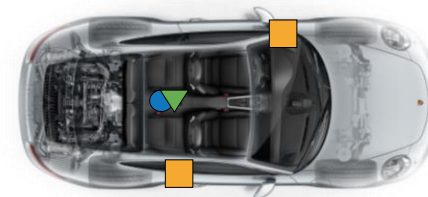
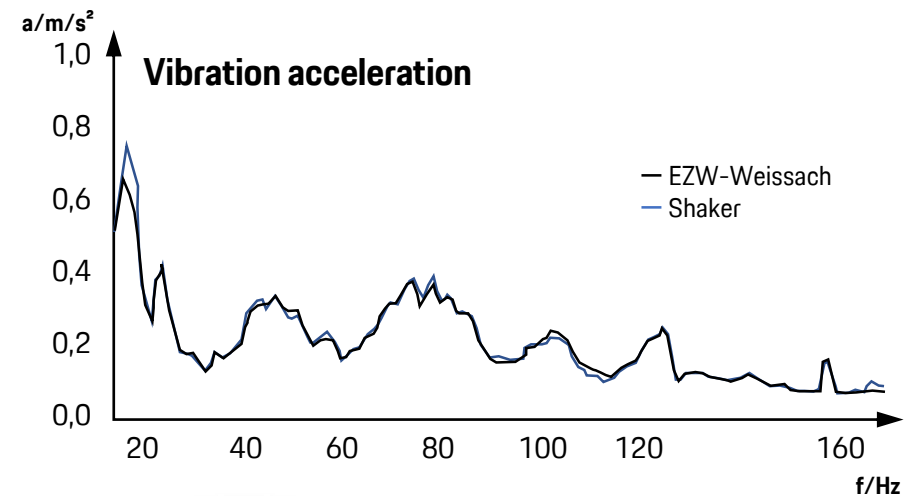
03

Iteration of the real body vibrations using shaker actuators on the test bench.



Verification

Stimulation profile comparison: Weissach test track vs. shaker



- ▼ Controller position
- Sensor position
- Shaker