

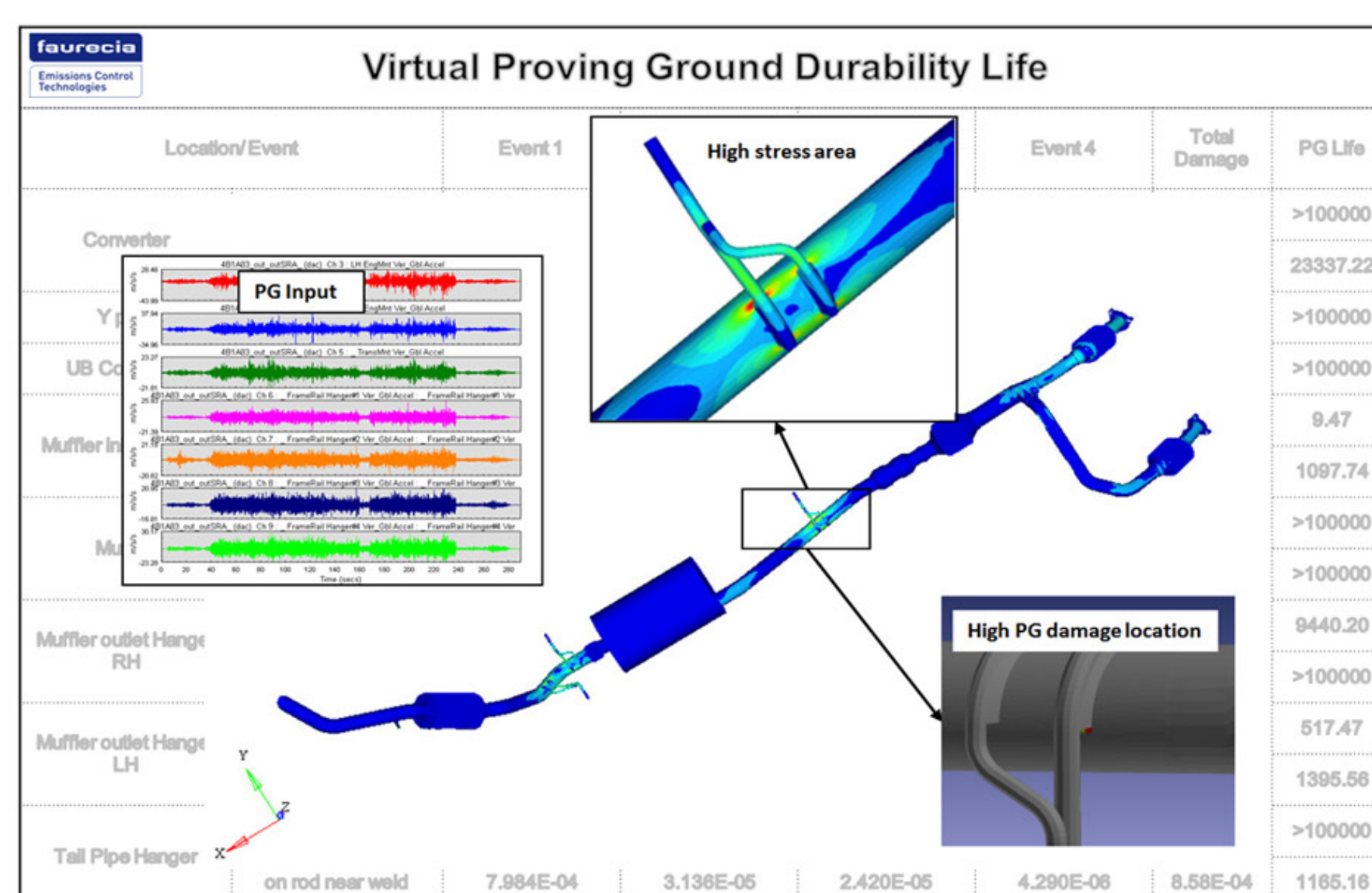
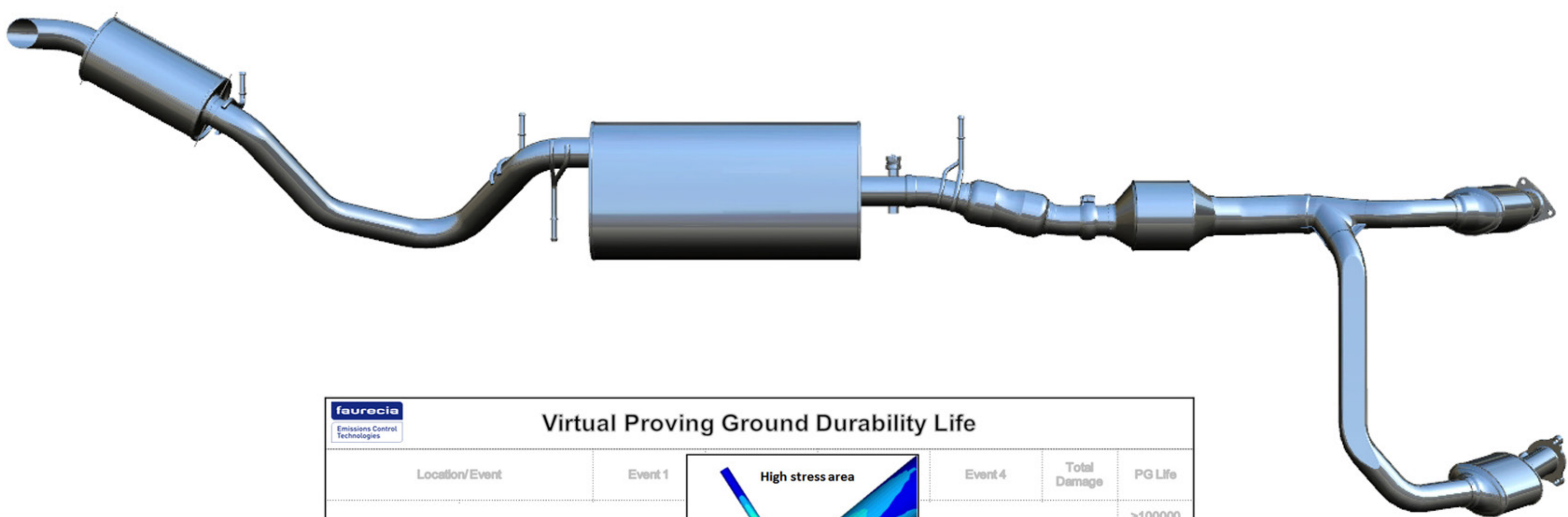


Faurecia Emissions Control Technologies

Exhaust System for GM K2xx Light Duty Truck

Analysis Led Design and Virtual Validation (ALDVV) is a novel process to virtually validate the Proving Ground (PG) durability life. A durability assessment process is deployed in this exhaust development phase. The process calculates PG life for all joints. From those results, three areas can be categorized, i) very large durability life (potential over design); ii) minimum PG life; durability concerns, and iii) balanced design. Areas with durability concerns need to be redesigned. Areas with potential over design can be considered for weight reductions through down gauging.

- Lower weight exhaust systems are becoming a requirement from the OEMs. Faurecia utilizes its technology leading Analysis Led Design and Virtual Validation (ALDVV) process to reduce the exhaust weight in a reliable, timely manner.
- The total weight is reduced by 1.15 kg through reducing the pipe thickness for muffler inlet pipe, oval axle pipe and tail pipe from 1.5mm to 1.2mm.
- The total cost saving over baseline is over \$1 million.



Presented in collaboration with:

