

# HOW IT WORKS: **SUPERTRUCK**

By reexamining every component of the truck – from the bumper to the back of the trailer – Volvo Trucks was able to drastically reduce the vehicle weight as part of the SuperTruck project. In fact, these lightweight features reduced the SuperTruck's weight by 3,200 pounds.

## **DOWNSIDIZED ENGINE**

Thanks to much lower weight and aerodynamic drag the truck requires a lot less engine power, SuperTruck was able to use a Volvo D11 engine instead of the baseline D13 engine. This downsizing yielded further weight reduction and opportunities for aerodynamic improvements, which in turn yielded even lower power requirement.

## **CARBON-FIBER**

The entire roof, hood and side fairings are made from carbon fiber to evaluate the potential weight reduction possible with stronger materials. Volvo Trucks is simultaneously working to develop new materials with similar properties but at a much lower cost, like recycled carbon fiber



## **ALUMINUM FRAME ASSEMBLY**

The SuperTruck's chassis is almost entirely made of aluminum; only the bolts holding it together are steel. The aluminum chassis is almost half the weight of traditional steel, and has the greatest impact on the vehicle weight.

## **COMPOSITE AERO DEVICES**

Our SuperTruck partner Ridge Corp developed trailer add-on aerodynamic devices made of composite materials in order to meet the desired durability and stiffness without compromising payload capacity. When these fairings are done saving fuel on trailers, their material can even be recycled and used to make new aero devices.