

Technical Disclosure Commons

Defensive Publications Series

October 2020

VEHICLE CONCEPT WITH AIR CONDITIONING UNIT IN THE FRONT

Axel Unger
Bertrandt Ingenieurbüro GmbH

Follow this and additional works at: https://www.tdcommons.org/dpubs_series

Recommended Citation

Unger, Axel, "VEHICLE CONCEPT WITH AIR CONDITIONING UNIT IN THE FRONT", Technical Disclosure Commons, (October 28, 2020)

https://www.tdcommons.org/dpubs_series/3714



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.

VEHICLE CONCEPT WITH AIR CONDITIONING UNIT IN THE FRONT

Technical task:

Air conditioning unit in the front with defined air outlets into the interior

Initial situation:

Conventional vehicles have an air conditioning unit (usually left-hand drive/right-hand drive) that uses the installation space of the cockpit in the passenger area. When driving autonomously, lying positions are aimed for. This is restricted for the driver by the steering wheel and pedals, and for the passenger by the air conditioning unit. In addition, the installation space for passenger entertainment is limited.

Solution:

More space for the rear passenger on the passenger side by moving the air conditioning unit to the front of the vehicle. Air conditioned air enters the interior through defined passages. Premise: no front axle drive, possibly wheel hub motors.

Advantages:

- Passenger has considerably more space in the interior
 - ➔ Use for entertainment, e.g. second AR-HUD or retractable screen
 - ➔ more room for the feet in the lying position - better inclination angle of the seat
 - ➔ Rear seat occupant can shift lying position, because the front seat can be moved further forward
- Uncontrolled front wall

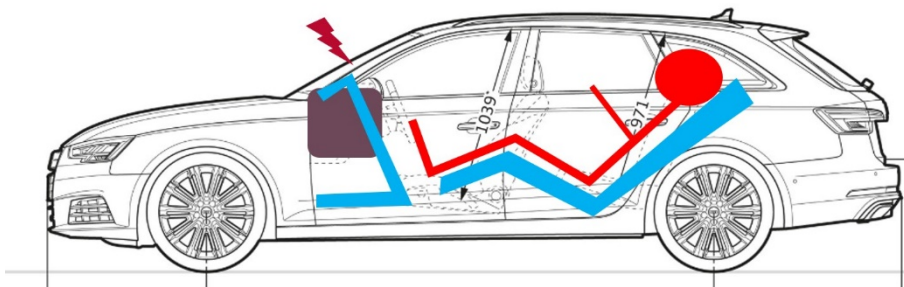


Fig. 1: Air conditioning unit in the installation space in the cockpit, passenger side

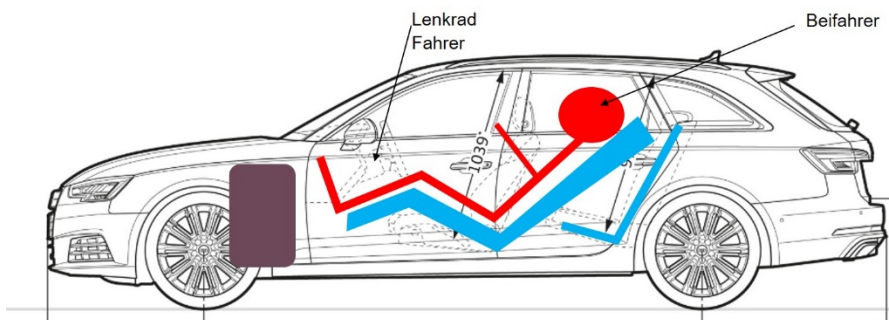


Fig. 2: Air conditioning unit in the front

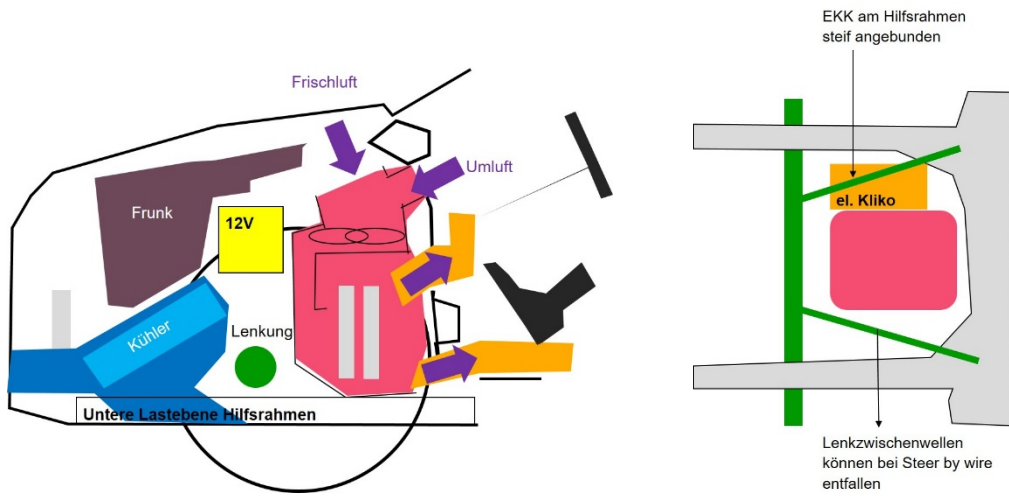


Fig. 3 and 4: Layout front end

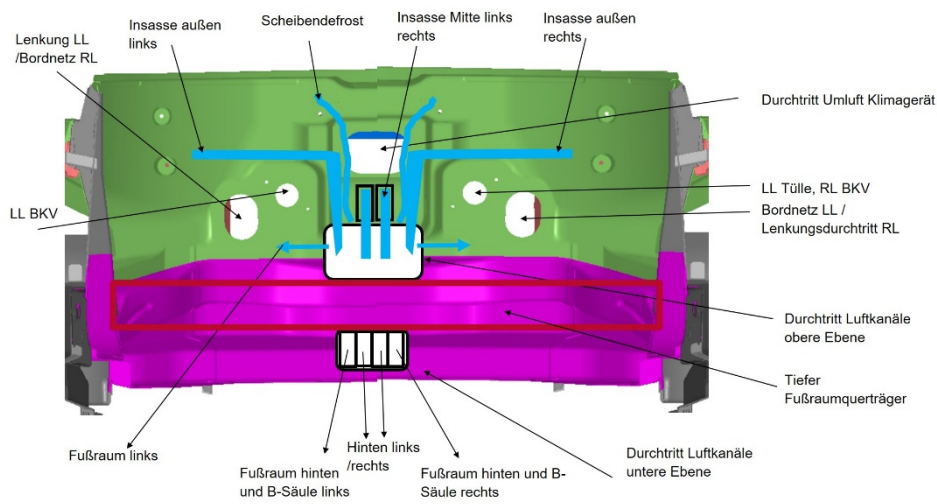


Fig. 5: Uncontrolled front wall