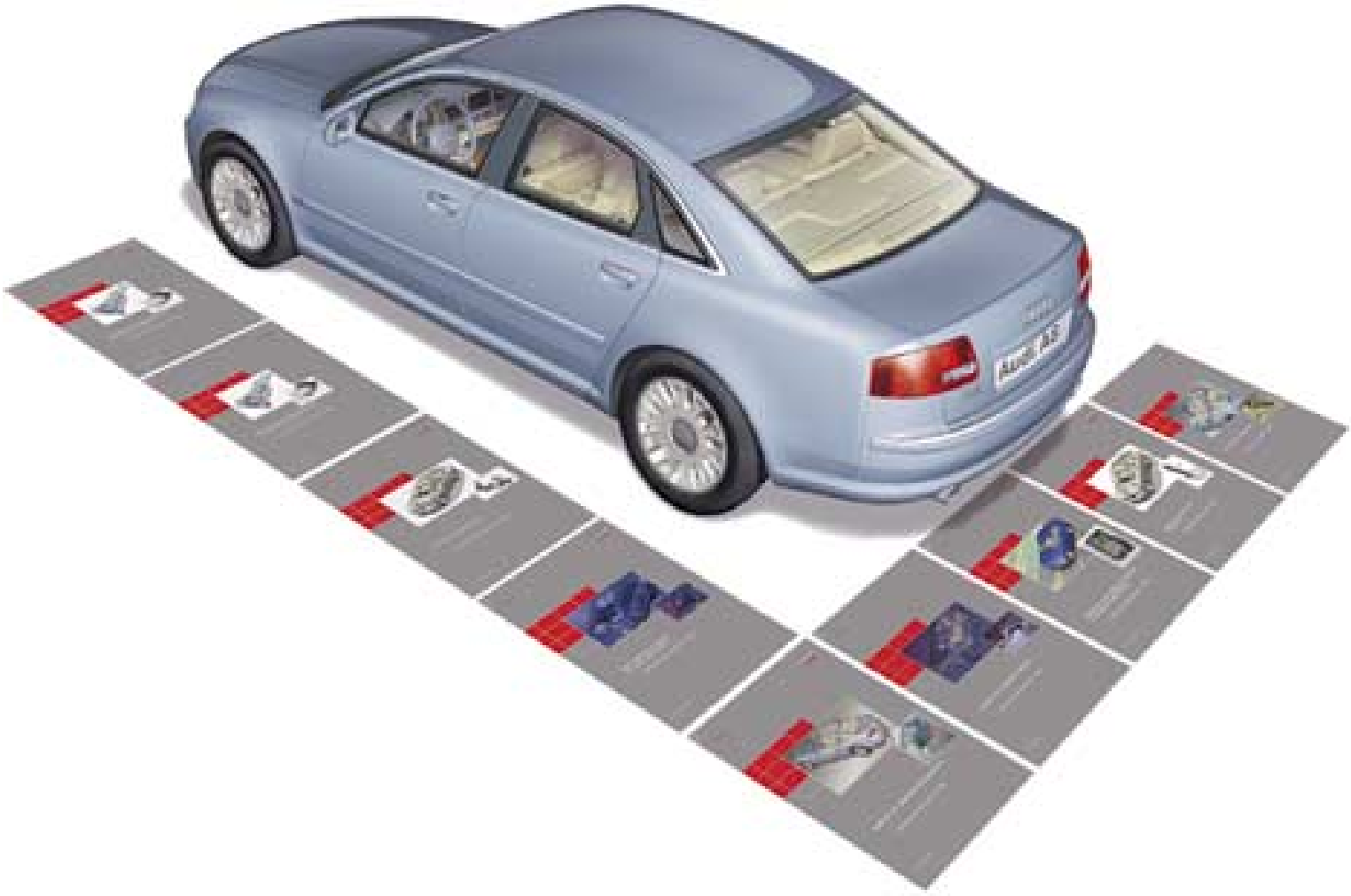
Service.

AUDI A8 ´03 - Technical Features

Self Study Programme 282

Complete vehicle information

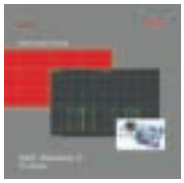
The design and operation of the Audi A8 ´03 are described in the following Self Study Programmes:



SSP 283 – 6-speed automatic gearbox 09E in the Audi A8 '03 - Part 1
SSP 284 – 6-speed automatic gearbox 09E in the Audi A8 '03 - Part 2
SSP 285 – Running gear in the Audi A8 '03
SSP 286 – New data bus systems - LIN, MOST, Bluetooth™
SSP 287 – Audi A8 '03 - Electrical components
SSP 288 – Audi A8 '03 - Distributed functions
SSP 289 – Adaptive cruise control in the Audi A8 '03
SSP 292 – Adaptive air suspension in the Audi A8 '03
SSP 293 – Audi A8 '03 - Infotainment

Other helpful information on the Audi A8 ´03 can be found on the adjacent CD ROMs.

Electrical system



CAN data bus 2

Contents

The Self Study Programme contains information on design features and functions.

The Self Study Programme is not intended as a Workshop Manual. Values given are only intended to help explain the subject matter and relate to the software version applicable at the time of SSP compilation.

Use should always be made of the latest technical publications when performing maintenance and repair work.

New

Attention Note

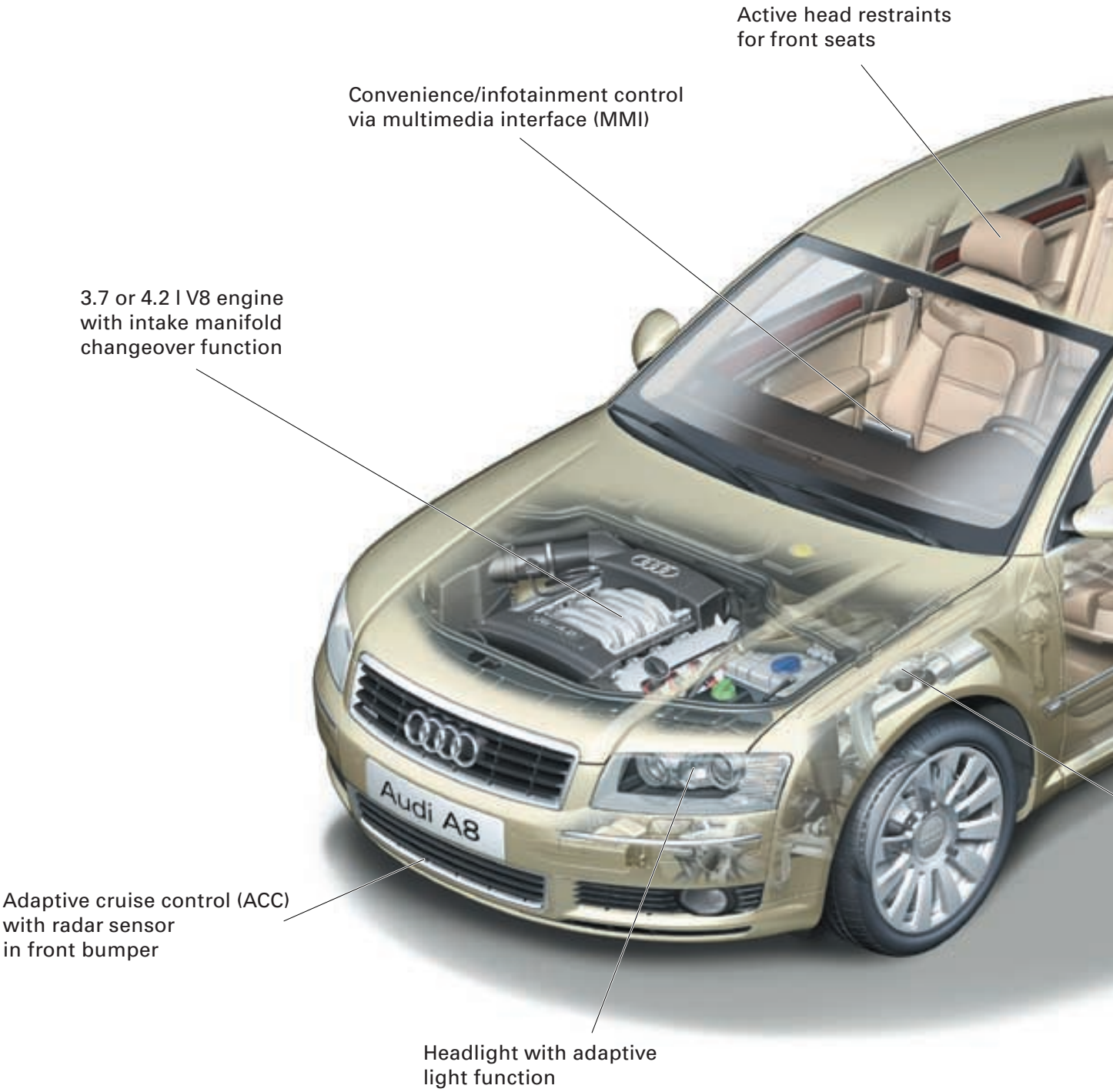
Introduction

The new Audi A8 is designed to replace its predecessor of the same name which achieved a total production figure of 105,092 since its introduction in June 1994. This was the first standard saloon with aluminium body and epitomised a new philosophy in the luxury vehicle sector.

The weight-saving Audi Space Frame ASF represented a major breakthrough in terms of enhanced vehicle dynamics, whilst at the same time solving the problem of increasing weight.

This body concept was further perfected in the Audi A2 and the design of the Audi A8 ´03 reflects the experience gained from both projects.

The aim when developing the Audi A8 ´03 was not merely to surpass its predecessor in terms of technical features and details.

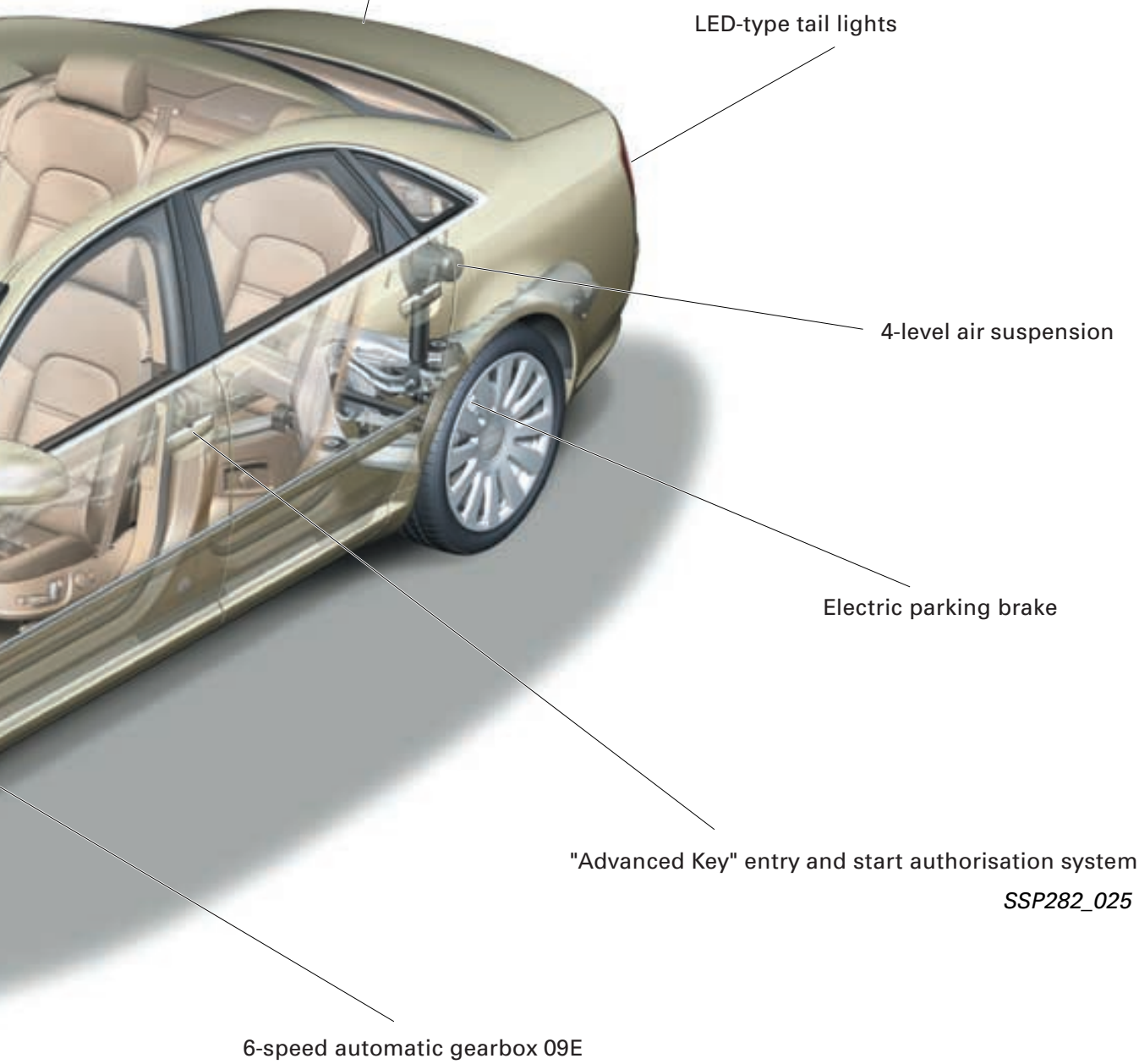


As the Audi flagship, the new Audi A8 is intended to symbolise the product identity of the next Audi generation.

An uncompromising sporty character, clear-cut design, innovative technological systems and the highest possible quality level combine to provide an unforgettable driving experience.

In other words:

Audi at its proverbial best.



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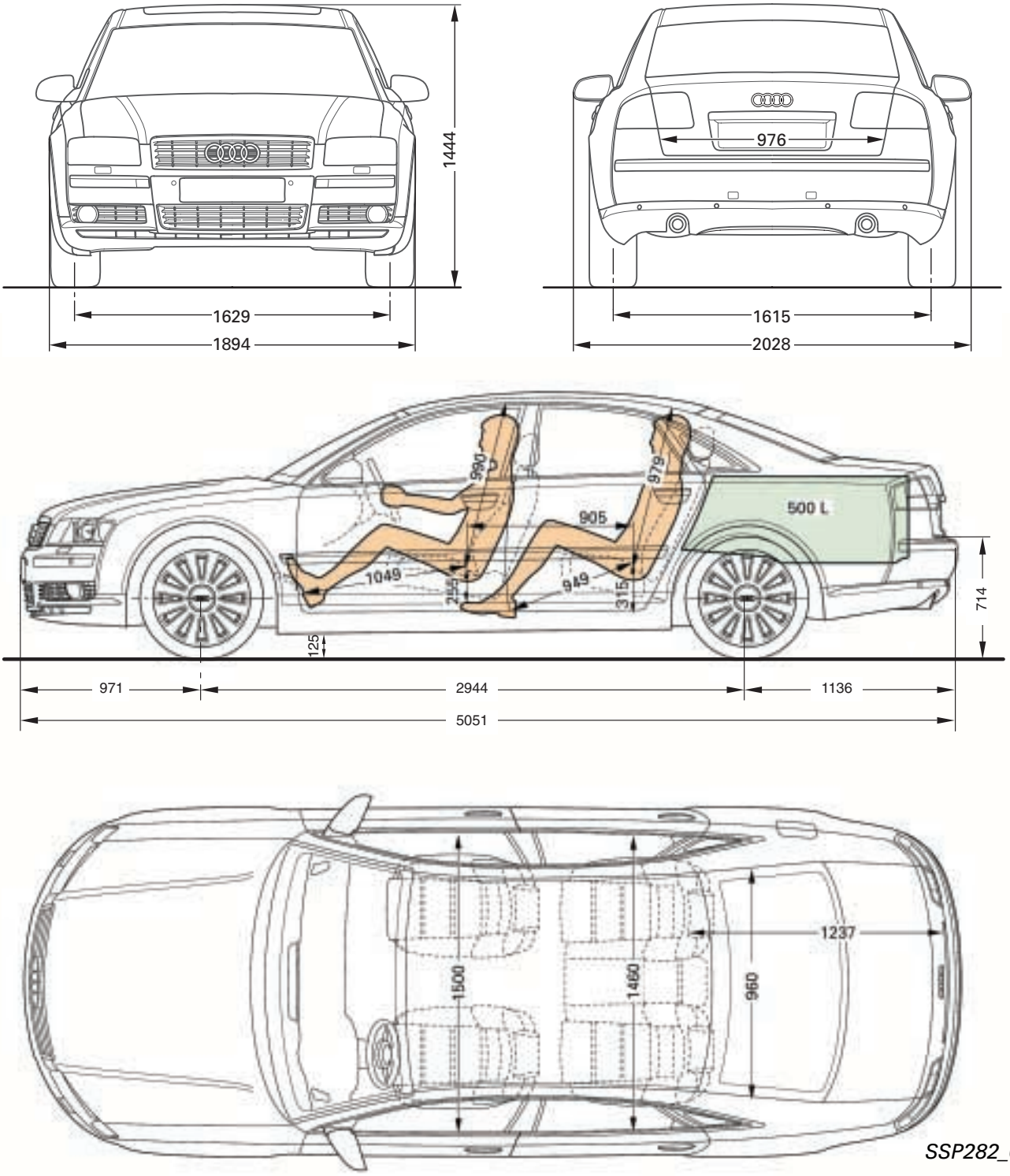
Brief outline



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Kerb weight	1,780 kg	Gross weight	2,380 kg
Turning circle	12 m	Luggage compartment volume	approx. 500 l
Tank capacity	approx. 90 litres	Drag coefficient	0.27 C_d

Body

The Audi A8 ´03 sets new standards in its class by combining lightweight construction with outstanding stability. This is achieved through the use of innovative Audi Space Frame technology for the body design of the Audi A8.
The technical progress reflected by the unique body concept stems from the consistent implementation of experience gained from the aluminium Audi A8 and A2 models.

Based on the findings obtained from these vehicles, it was possible to further reduce the number of body components and significantly increase the level of automation in the production process as compared to the Audi A8 predecessor model.

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The static torsional rigidity of the new Audi A8 body is 60 % higher than that of the previous Audi A8 body.
A crucial contribution is made to the increased rigidity level by the advanced Audi Space Frame structure.

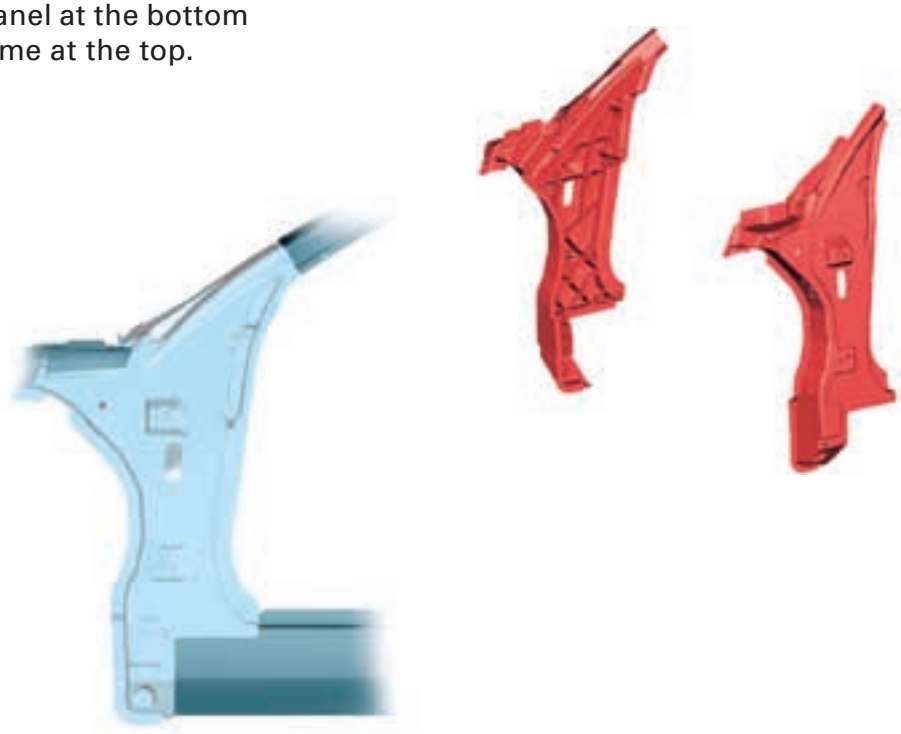
Characteristic features of the new structure:

- Large castings with numerous integrated functions and a high degree of joint strength
- IHF* sections – optimum cross sections at all locations, for example at side of roof frame
- Sheet metal panels with high levels of local rigidity thanks to the use of special technologies designed to achieve differing functional cross sections and structures

*IHF = Internal high-pressure forming

A-pillar

The A-pillar is made of two cast shells connected by rivets and welds.
The shells enclose the sill panel at the bottom and the continuous roof frame at the top.



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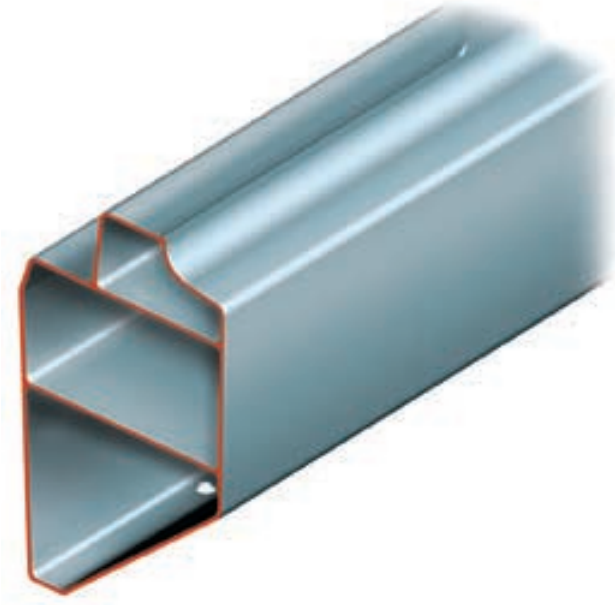
Sill panel

Use is made for the sill panel of a 3-piece extruded section.
The extruded section must be replaced in the event of sill panel damage.
Depending on the nature of the damage, either the entire section has to be replaced or parts of it by way of three separating sleeves.



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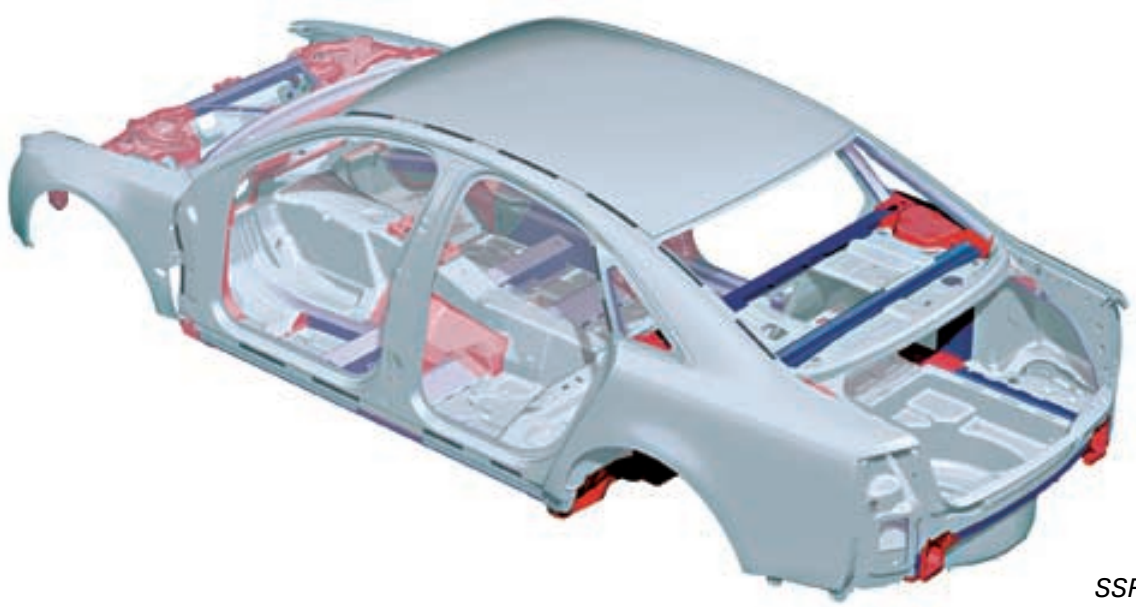
Rear end

The rear end has been completely redeveloped. The two large central castings are the one connecting the sill panel/ longitudinal member and the C/D-pillar connecting element.

The sill panel/longitudinal member connecting element is the largest casting. It supports the entire rear sub-frame and links the rear longitudinal member to the sill panel. Its great rigidity is designed to protect the tank in between in the event of a rear-end collision.



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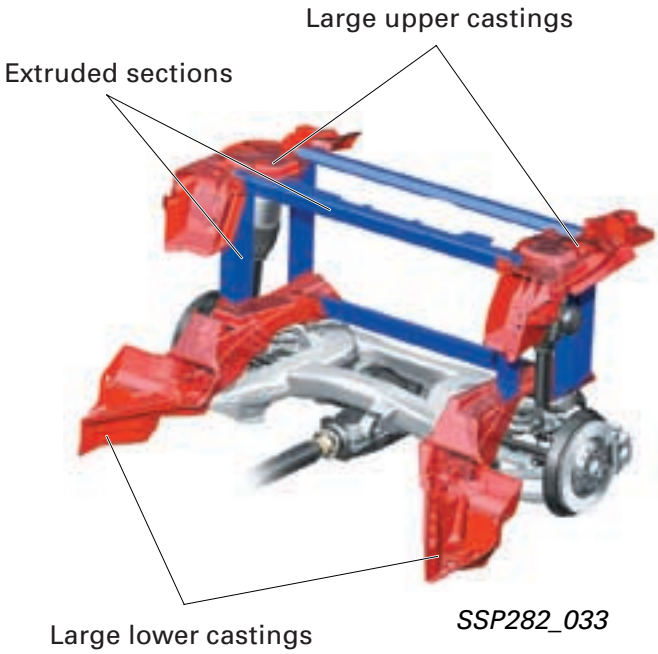
The C/D-pillar connecting element (large upper casting) accommodates the suspension strut at the top and the seat belt at the front, in addition to forming the terminating side section of the roof frame.

The large upper and lower castings are interlinked by way of two straight extruded sections and form the framework for the air suspension strut holder.



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