



ŠKODA Fabia III

Vehicle Introduction

Part I

Self-Study Programme

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The official launch of series production of the new ŠKODA Fabia III model took place on 28 August, 2014, in the ŠKODA AUTO factory, Mladá Boleslav.

Instructions for assembly, disassembly, repairs, diagnosis and detailed user information can be found in VAS diagnostic testers and vehicle's onboard literature.

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This SSP is not subject to updating.



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1. Introduction

1.1 Vehicle Presentation

The new ŠKODA Fabia III is the third generation of a favourite model whose production began already in 1999.

Thanks to the uniform design line of the new vehicles from the Mladá Boleslav automobile factory, one can immediately see that the new Fabia III comes from the ŠKODA AUTO family.

1.2 Design Lines of the ŠKODA Auto Family

The bonnet features four profiled mouldings. They are significantly curved in the front section of the new Fabia III. They proceed to its A columns and over the roof to the vehicle's rear section. The further hereditary elements of the new ŠKODA cars, including the new Fabia III include the "clover-leaf" arrangement of their headlights and fog lights, as well as the radiator grill with its chrome frame. The automobile factory logo is placed in the bonnet's front section.



ŠKODA Fabia III

SP103_1



SP103_4

ŠKODA Octavia III



SP103_5

ŠKODA Rapid

2 Body Design and External Vehicle Elements

2.1 General View of the ŠKODA Fabia III Design

THANKS TO ITS NEW DESIGN, THE ŠKODA Fabia III offers its fresh and dynamic appearance. The new vehicle's ferocity is emphasized by its distinctive edge on the body sides. It connects the headlights with the rear lights. On the vehicle sides, there it highlights the robustness of the door lower section and strengthens the justified sense of safety inside the vehicle. The windows feature thin frames, which look fresh and light when the door is open.



B column plastic cover, like in the ŠKODA Rapid model

The transition between the rear window and door body is formed by a dynamic curve that rises to the C column, like in the ŠKODA Octavia III model

Door handles with the same colour as the body

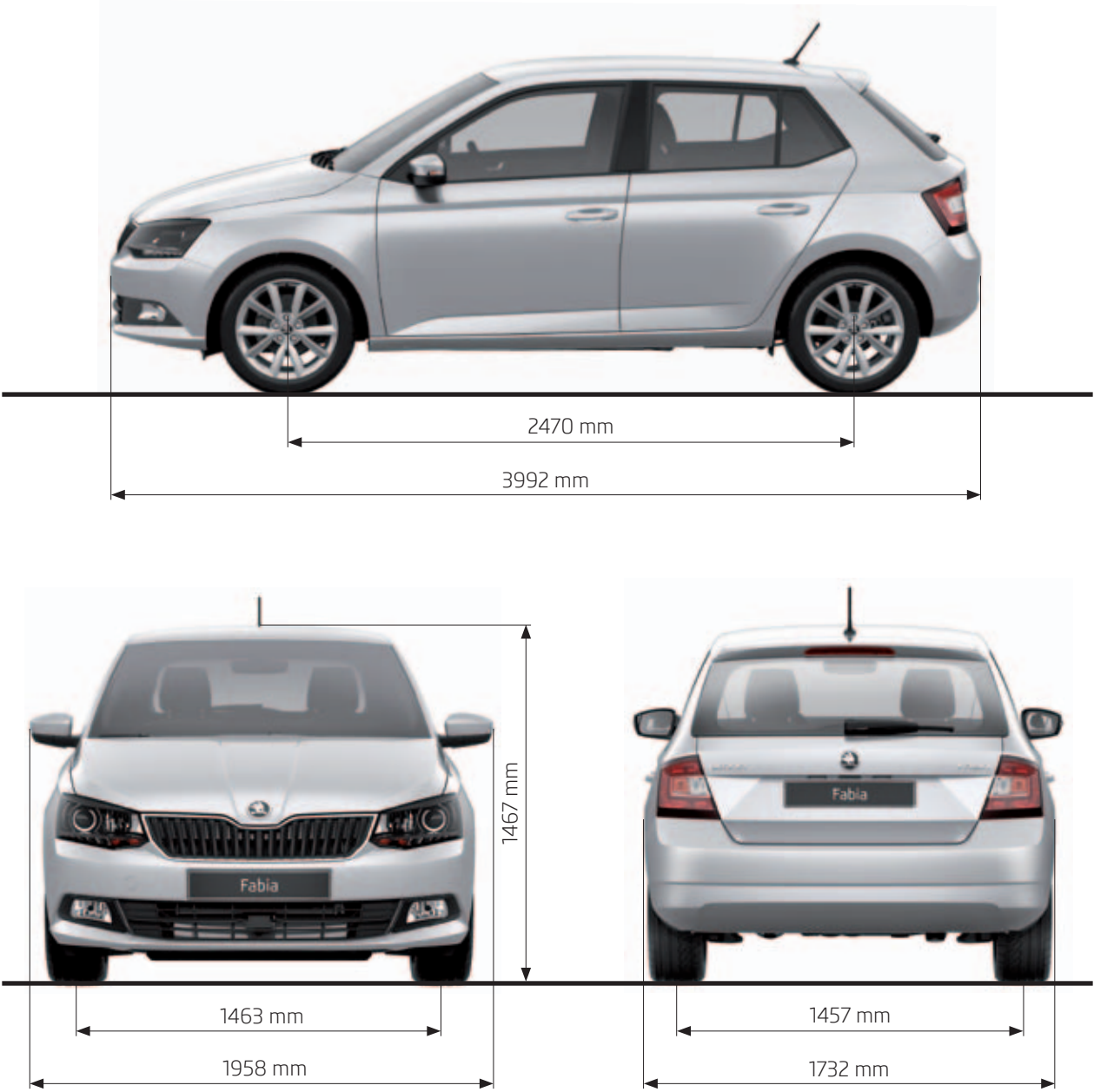
Automobile factory designation with the ŠKODA WORDING

Model designation with the Fabia wording

The distinctive edge on the body sides forms a dynamic line, which underlines the new model's ferocity

C-shaped rear combined lights

2.2 Exterior Vehicle Dimensions



Exterior Vehicle Dimensions

Length	3992 mm
Width	1732 mm
Width with mirrors	1958 mm
Height	1467 mm
Height (with a Rough Road Package)	1482 mm
Height (with a Sport Package)	1452 mm
Wheelbase	2470 mm
Clearance	133 mm
Clearance height (with a Rough Road Package)	141 mm
Clearance height (with a Sport Package)	118 mm
Front wheel track	1463 mm
Front wheel track (vehicles with the 1.2 l/81 kW TSI engine)	1457 mm
Rear wheel track	1457 mm
Rear wheel track (vehicles with the 1.2 l/81 kW TSI engine)	1451 mm
Front overhang	847 mm
Rear overhang	676 mm

Overhang angles*

Front overhang angle	14.6 °
Rear overhang angle	17.6 °

* The specified values mean the maximum slope angle, which the vehicle may slowly proceed on without touching the ground with its bumper or chassis.

2.3 B Column Plastic Cover

The ŠKODA Fabia III side door design is similar to the ŠKODA Rapid model design with the thin vertical window frame in the B column area.



Four clips attach the plastic cover to the B column.

3 Vehicle Lighting System

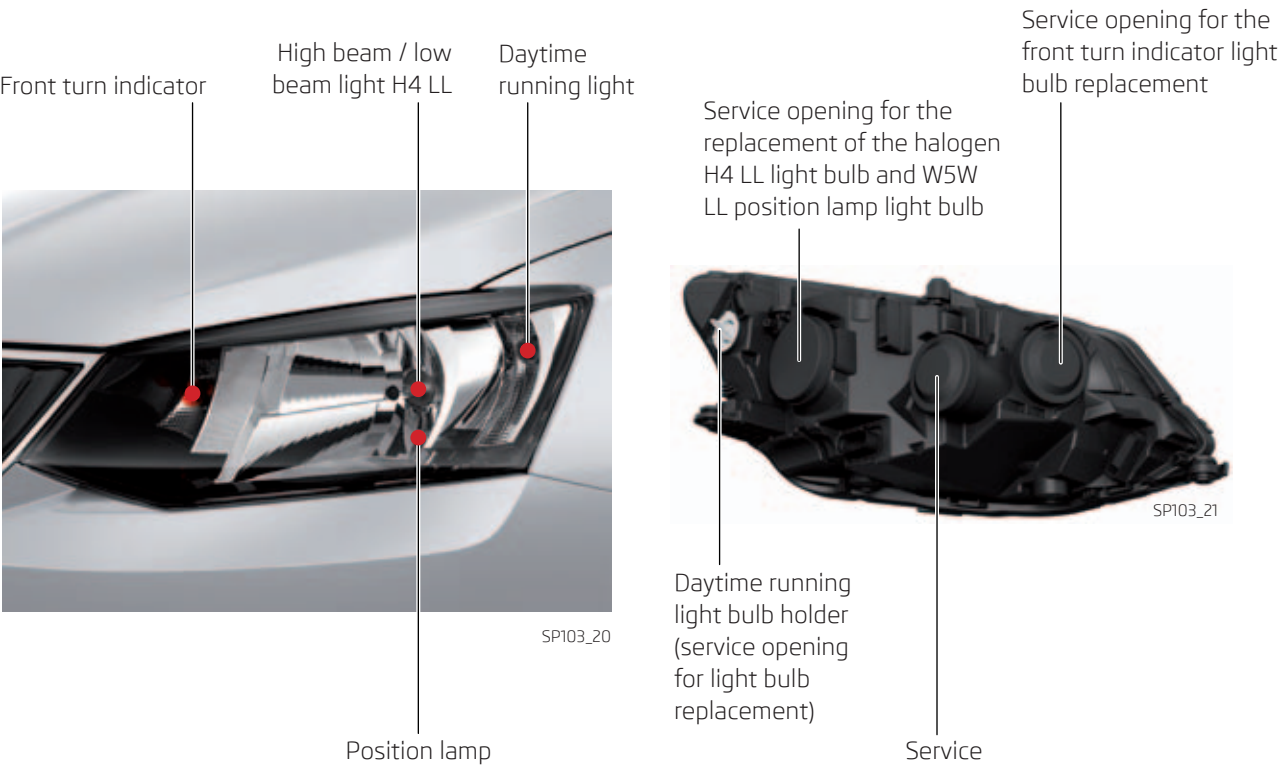
3.1 Headlights

The headlights are prepared for the new ŠKODA Fabia III model in two variants:

- Halogen H4 headlight with integrated daytime running lights source
- Halogen H7 headlight with LEDs for the daytime running lights function and position lamp (bi-functional)

Halogen headlight H4

The headlight basic version includes a single-piece headlight with clear optics. It uses a primary dual filament bulb **H4 LL 60/55W** for high beams / low beams. The daytime running light function utilizes a **P21W LL light bulb**. The headlight also features a position lamp **W5W LL** light bulb and the turn indicator **PY 21W** light bulb.



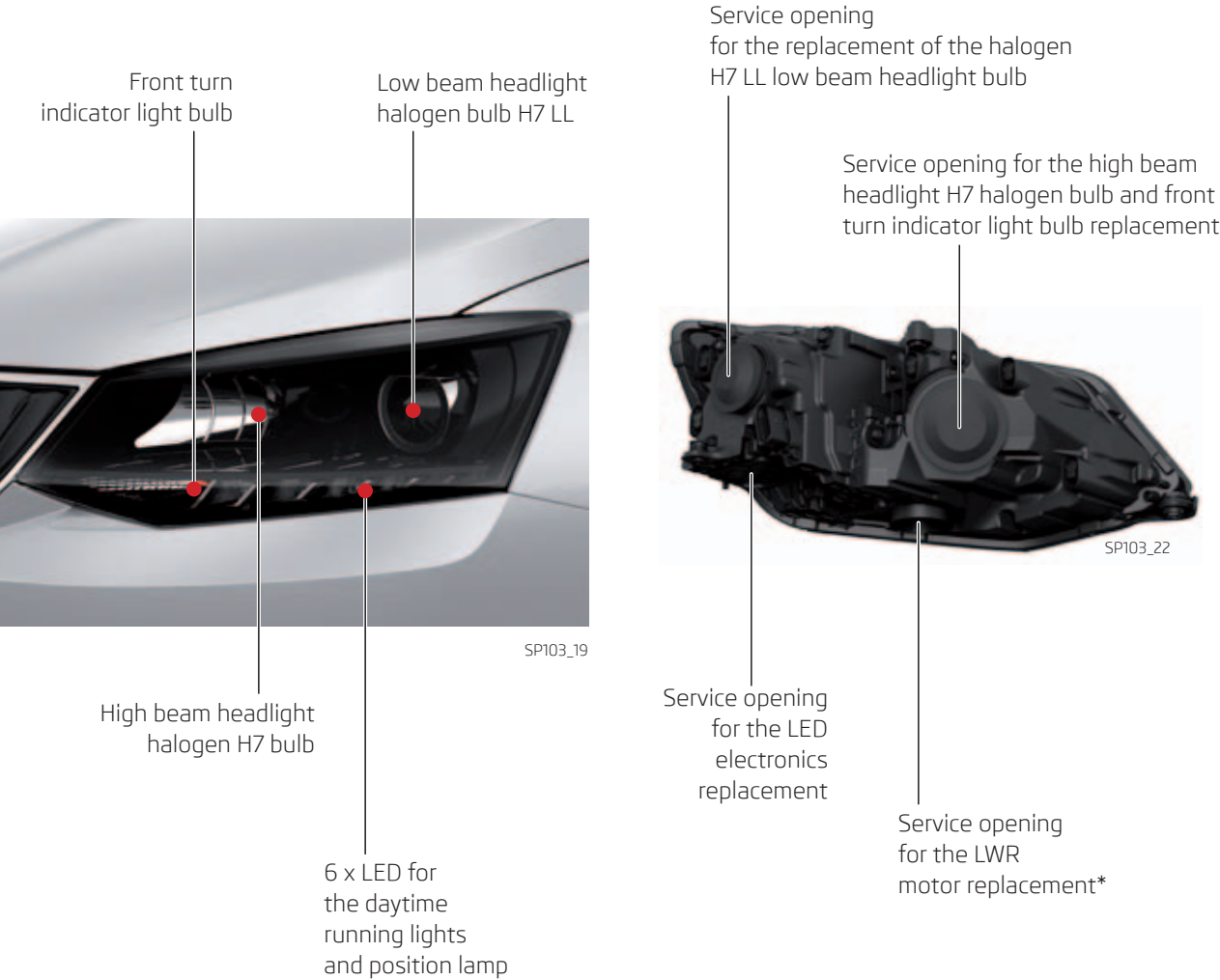
* Headlight tilt control motor.

Halogen headlight bulb specification	
High beam / low beam light	H4 LL** 12V 60/55W dual filament
Daytime running light	P21W LL**
Position lamp	W5W LL**
Front turn indicator	PY 21W

** Long Life – Long life light bulb.

Halogen headlight 2x H7 with LED source (for the daytime running light and position lamp)

The higher headlight version is represented by a single-piece light with clear optics and a pair of H7 halogen bulbs. The first **H7 LL** light bulb is used for low beams and the other **H7** bulb for high beams. The headlight also features an **LED daytime running light** that comprises of six LEDs, simultaneously functioning as position lights, and the turn indicator bulb **WY 21W**.



* Headlight tilt control motor.

Halogen headlight bulb specification	
High beam bulb	H7 12V 55W
Low beam headlight	H7 LL** 12V 55W
Daytime running light, position lamp	LED (6x LED)
Front turn indicator	WY 21W

** Long Life – Long life light bulb.

3.2 Fog Lights with the Corner Function (Lights for Turning)

The fog lights are located within the spoiler of the bumper's bottom part, and they are fitted with an **H8 35W** halogen bulb

The fog lights are static, featuring no turning mechanism.

Next to their standard fog light function, the fog lights also provide the Corner function that is executed by illumination of either the right-hand or the left-hand fog light, depending on the steering wheel turning direction or by switching on the direction indicators on the relevant side. Upon shifting into reverse gear in the Corner regime, both of the front fog lights turn on. If the fog lights are on, the Corner function is suppressed.



The Corner function is provided by the BCM on-board network control unit (J519).

Corner function activation conditions:

- Vehicle is started and it is moving at the max. speed of 40 km/hr
- The vehicle's low beam lights are on
- The fog lights are not on

The fog light goes on in the Corner mode when at least one of the conditions below is met:

- The steering wheel turning activation angle is exceeded
- The turn indicator to the relevant side is switched on
- Shifting into reverse gear (in the Corner mode, both of the fog lights turn on simultaneously)

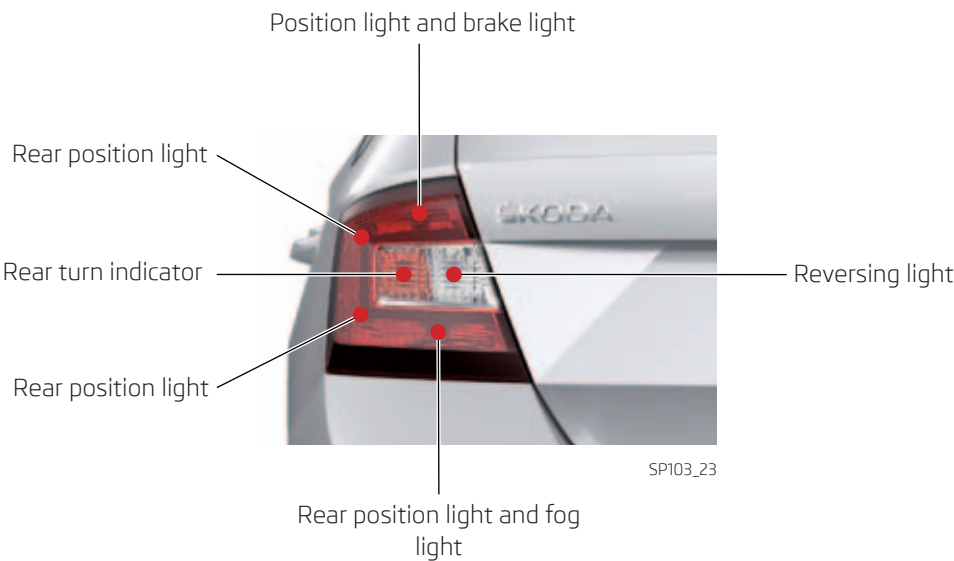
3.3 Rear Combination Lamp

The rear combination lamp of the ŠKODA Fabia III model is fully integrated into the fender area. The vehicle's fifth door contains the third brake light and the registration plate light. The rear combination lamp for ŠKODA vehicles is designed to form the already known C-shape.



Tail light with bulbs

The rear combination lamp features six bulbs.

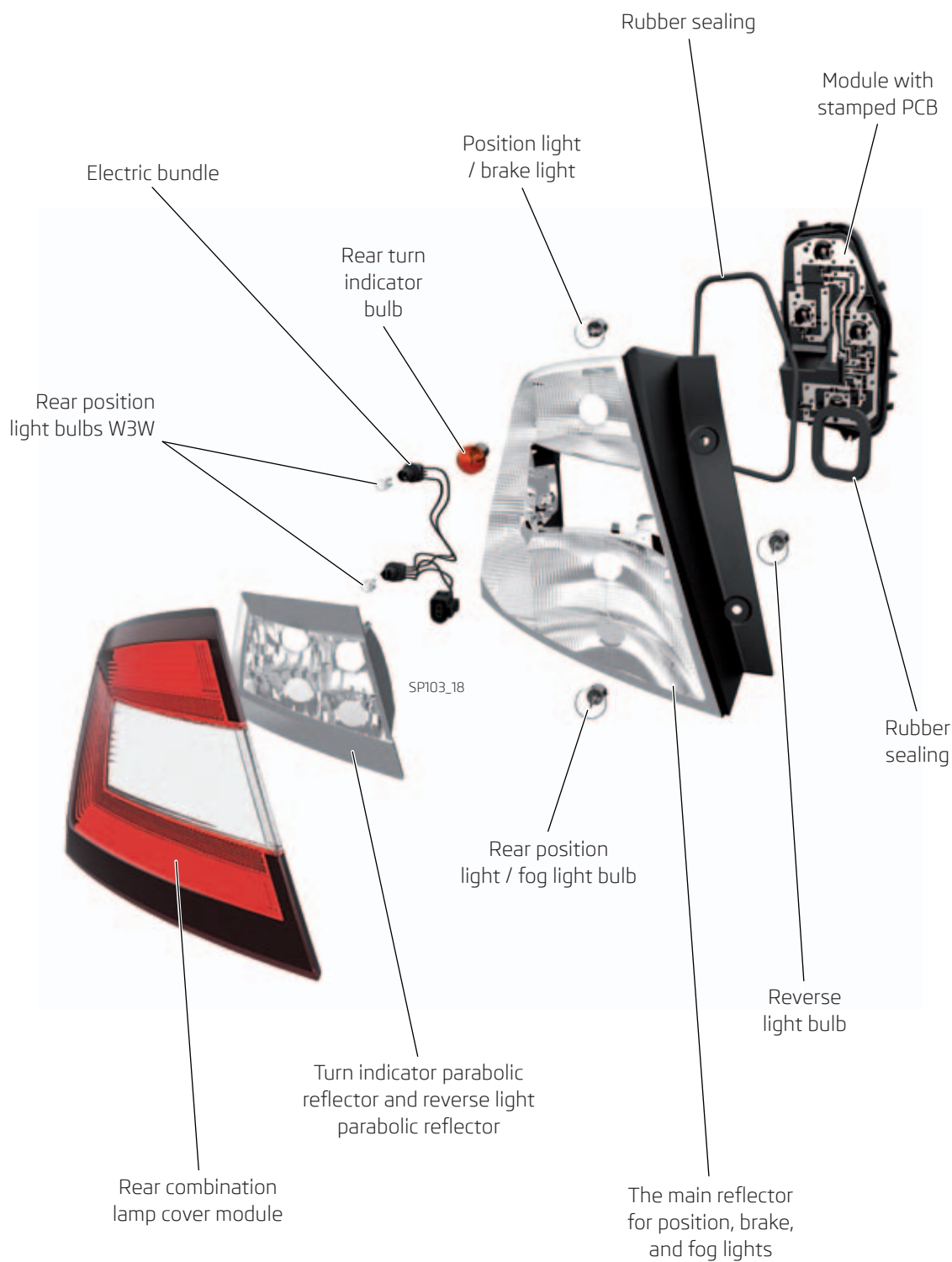


Tail light with bulbs	
Position light and brake light	P21W (18% / 100%) *
Position lamp	W3W (2x)
Rear turn indicator	PY21W
Rear position light and fog light	P21/4W dual filament **
Reversing light	P21W

* The BCM unit electronically controls the output of the brake / position light bulbs. In the case of the position light, the bulb uses 18 % of its maximum output, and the brakelight uses the maximum current, i.e. 100% of the bulb nominal output.

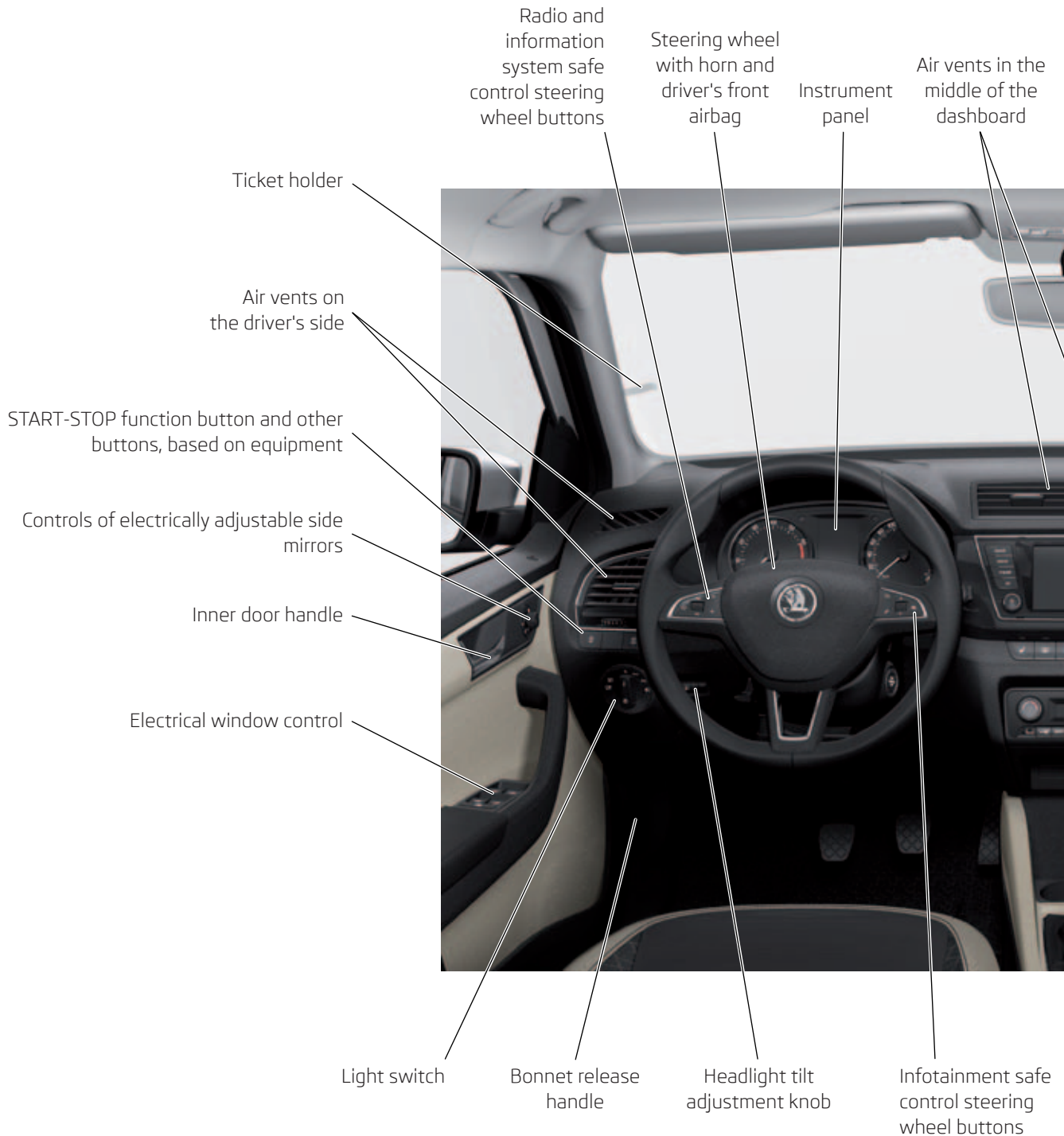
** The 4 W filament of the P21/4W dual filament bulb is used for the position light function, and the other one with 21 W output supports the fog light. In the ŠKODA Fabia III model, the rear fog light is always connected in one tail light only. In an LHD vehicle, a wire leads from the fog light BCM to the rear left headlight. In a RHD vehicle, it leads to the rear right headlight. The light bulb inside the tail light with unused fog light remains the same - P21/4W.

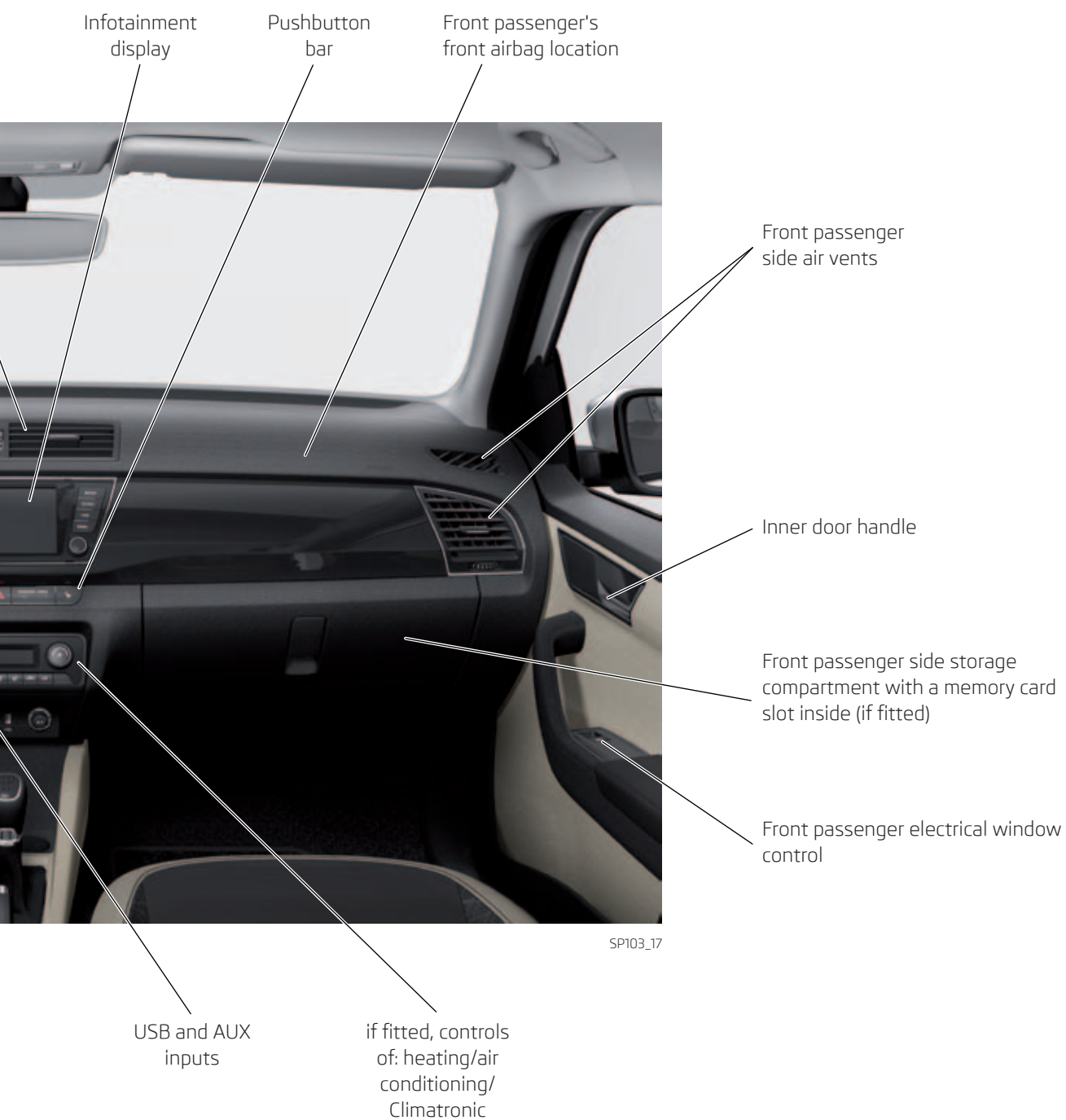
3.3.1 Rear Combination Lamp Design



4. Vehicle Interior

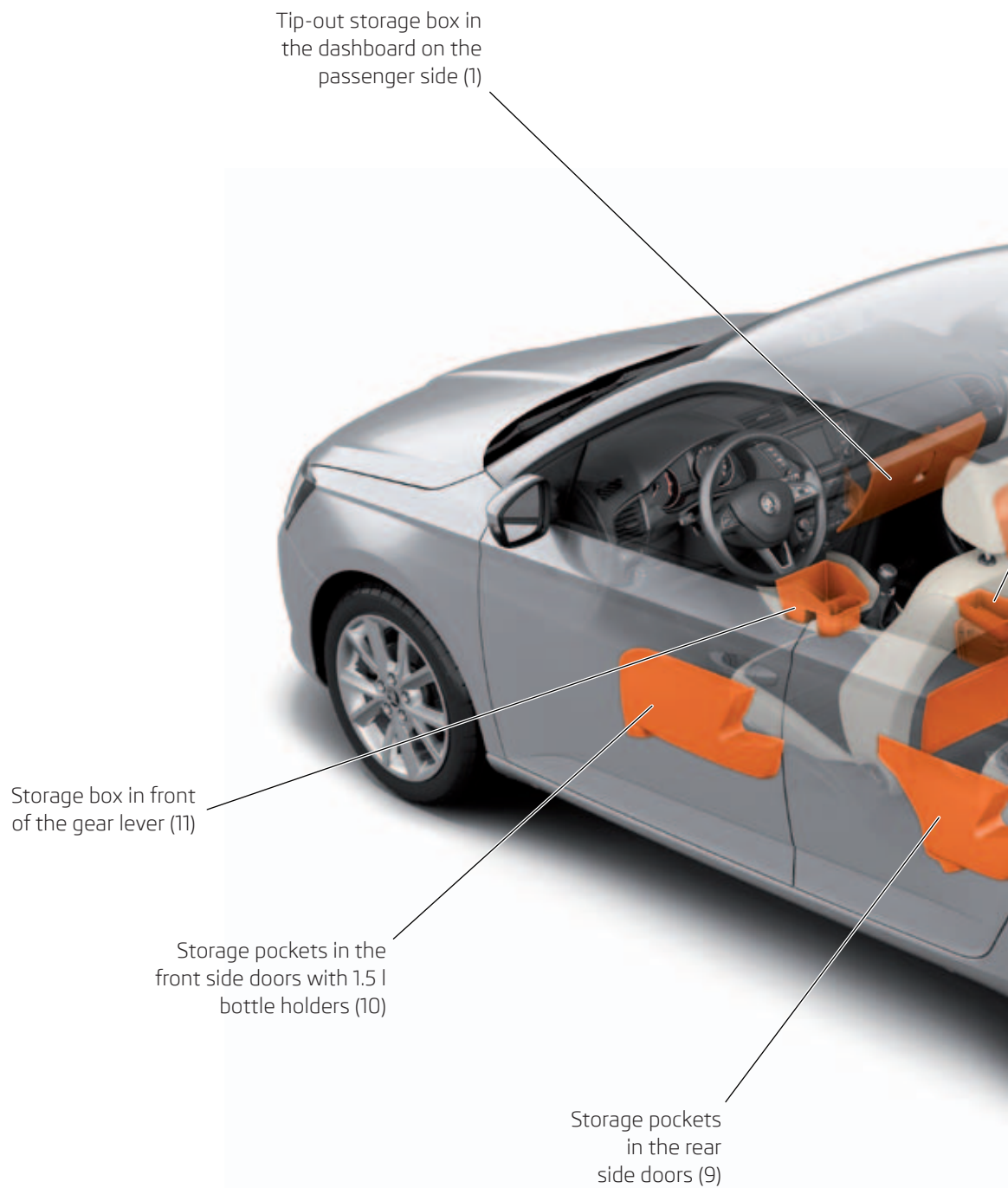
4.1 Interior of ŠKODA Fabia III

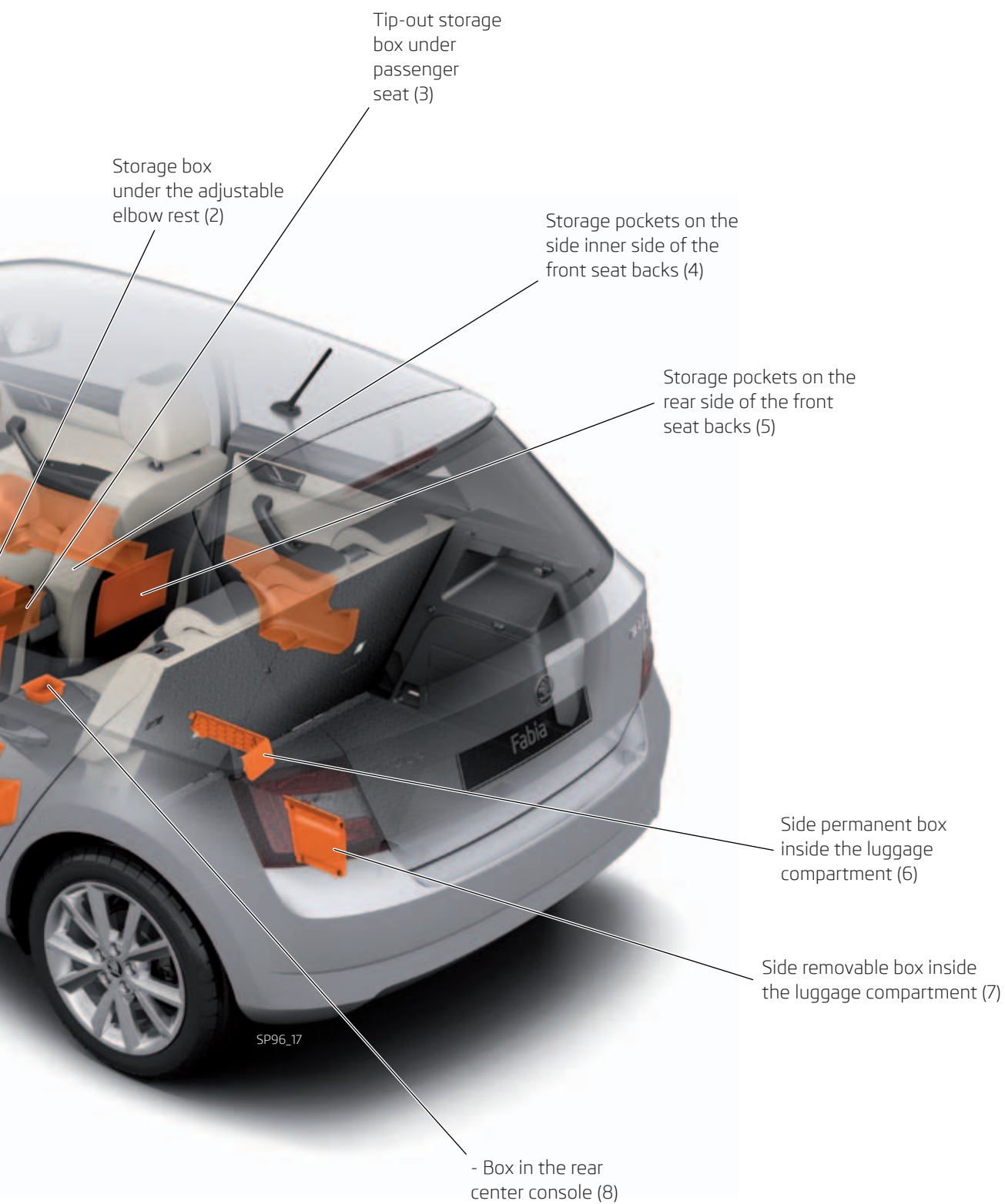




4.2 Storage Compartments Concept in the Vehicle Interior

The interior of the ŠKODA Fabia II model offers numerous practical storage compartments and boxes.





4.2.1 Detailed View of the Storage Components in the Vehicle Interior



(1)

SP103_16a



(2)

SP103_16c



(3)

SP103_16d



(4)

SP103_16e

- (1) - Tip-out storage box in the dashboard on the passenger side
- (2) - Storage box under the adjustable elbow rest
- (3) - Tip-out storage box under passenger seat
- (4) - Storage pockets on the side inner side of the front seat backs



(5)+(8)

SP103_16f



(6, 7)

SP103_16g



(9)

SP103_16h



(10)

SP103_16i



(11)

SP103_16j

- (5) - Storage pockets on the rear side of the front seat backs
- (6) - Side permanent box inside the luggage compartment
- (7) - Side removable box inside the luggage compartment
- (8) - Box in the rear center console
- (9) - Storage pockets in the rear side doors
- (10) - Storage pockets in the front side doors with 1.5 l bottle holders
- (11) - Storage box in front of the gear lever

4.3 Luggage Compartment

The luggage compartment features a firm removable and flexible storage box and a newly designed luggage compartment cover, which may be placed, besides its standard position, also into a lower position and behind the rear seat backrests.



SP103_8

Luggage compartment cover
in the lower position



SP103_7

Luggage compartment cover behind
the backrests of the rear seats

Tabulated luggage compartment dimensions

Luggage compartment volume	330 l
Length	716 mm
Width (between wheel arches)	958 mm

4.4 Smart Solutions



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Ice scraper

On the inner side of the fuel tank filler, you may find an ice scraper, which is quickly available even before opening the car.



SP103_55

Ticket holder

The ticket holder may be conveniently used for parking ticket holding.

4.5 Vehicle Inner Dimensions

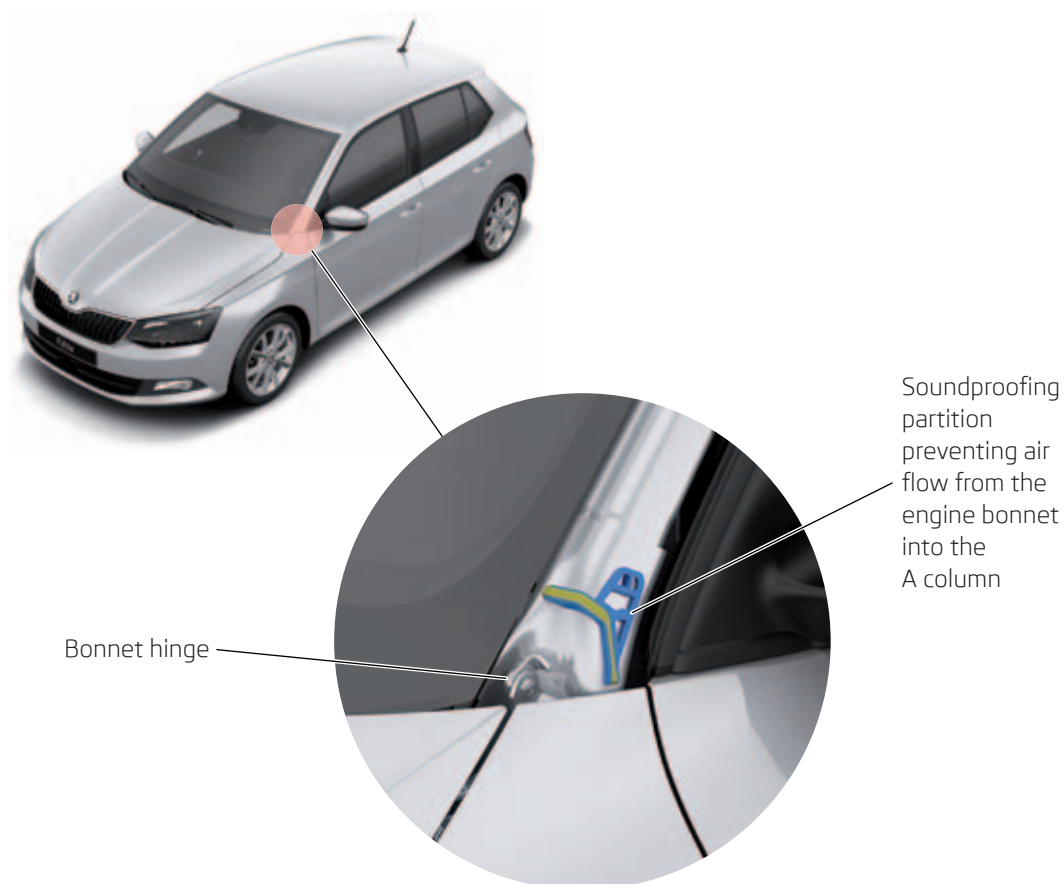


Tabulated vehicle inner dimensions	
Width in ells on the front seats	1401 mm
Width in ells on the rear seats	1386 mm
Head room in the front	1021 mm
Head room in the back	963 mm

5 Body

5.1 Bonnet Hinges Locations

The ŠKODA Fabia III features newly designed bonnet hinges. The bonnet hinges are attached to the upper spar, and their rotation axis is in the A column root. A special partition located inside the A column prevents undesirable air flow from the engine bonnet into the A columns.



SP103_34

5.2 Body Shell

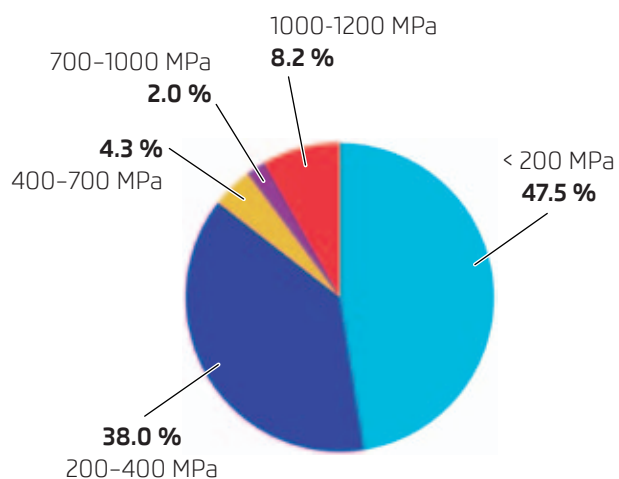
The required body strength is attained by using the strength and ultra-high-strength steels in the key locations of both the top body and the car floor part. All the body parts are designed to effectively absorb energy in order to protect the crew during impacts as much as possible. The application of these steels brought weight reduction.

In the new Fabia III, ultra-high-strength steel was used for its A and B columns, partition lower section, and lateral reinforcements of the front and rear bumpers.

Depending on the yield point, steel is classified into groups.

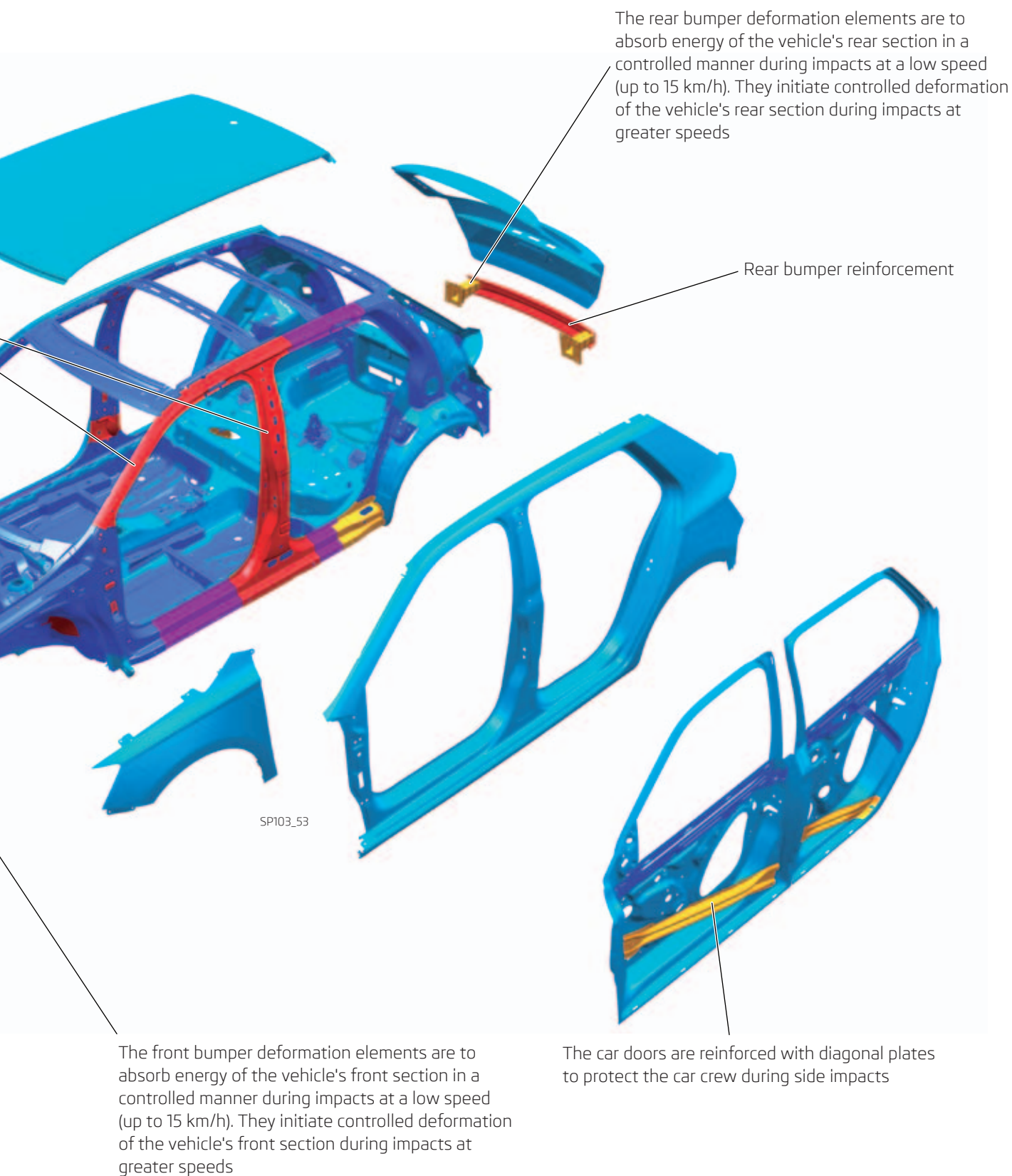
	< 200 MPa	Low-strength
	200–400 MPa	High-strength
	400–700 MPa	High-strength with increased yield point
	700–1000 MPa	Cold formed ultra-high-strength
	1000–1200 MPa	Hot worked and hardened ultra-high-strength

Chart of percentages of the individual steel strength groups in terms of the whole body:



The ultra-high-strength hot formed welded body parts like the lower A column, lateral wall lower section, and the reinforcements of the A and B columns protect the crew against frontal and side impacts

Front bumper reinforcement



5.3 Progressively Deformable Front End of the Vehicle

Under the front bumper of the ŠKODA Fabia III, there are the following structural elements of the car's passive safety:

- Lower crossbeam for pedestrian protection
- Foam component for pedestrian protection
- Front bumper reinforcement



The bumper design is to protect the important parts installed in the vehicle's front section as much as possible during low speed impacts.



Front bumper reinforcement

The front bumper reinforcement includes the deformable elements that will absorb a large amount of kinetic energy induced during low speed impacts (up to 15 km/hr). Thus, they efficiently reduce the risk of damage to the engine compartment and the supporting body structure.

During high speed impacts, the bumper reinforcement contributes in convenient initiation of the deformation of longitudinal profiles which are designed so that they, at the same time with further body structure, absorb the crash energy, thus minimizing the crew injury hazard.

Lower crossbeam and foam component to protect pedestrians

The lower pedestrian protection crossbeam and the pedestrian protection foam component are designed to minimize injury of the pedestrian's legs when being hit by the car. The main monitored criteria are the deceleration of pedestrian leg's movement, the bend angle in the knee joint, and the shear in the knee joint. The entire system is tuned based on calculations and tests so that the values of the criteria above are as low as possible.

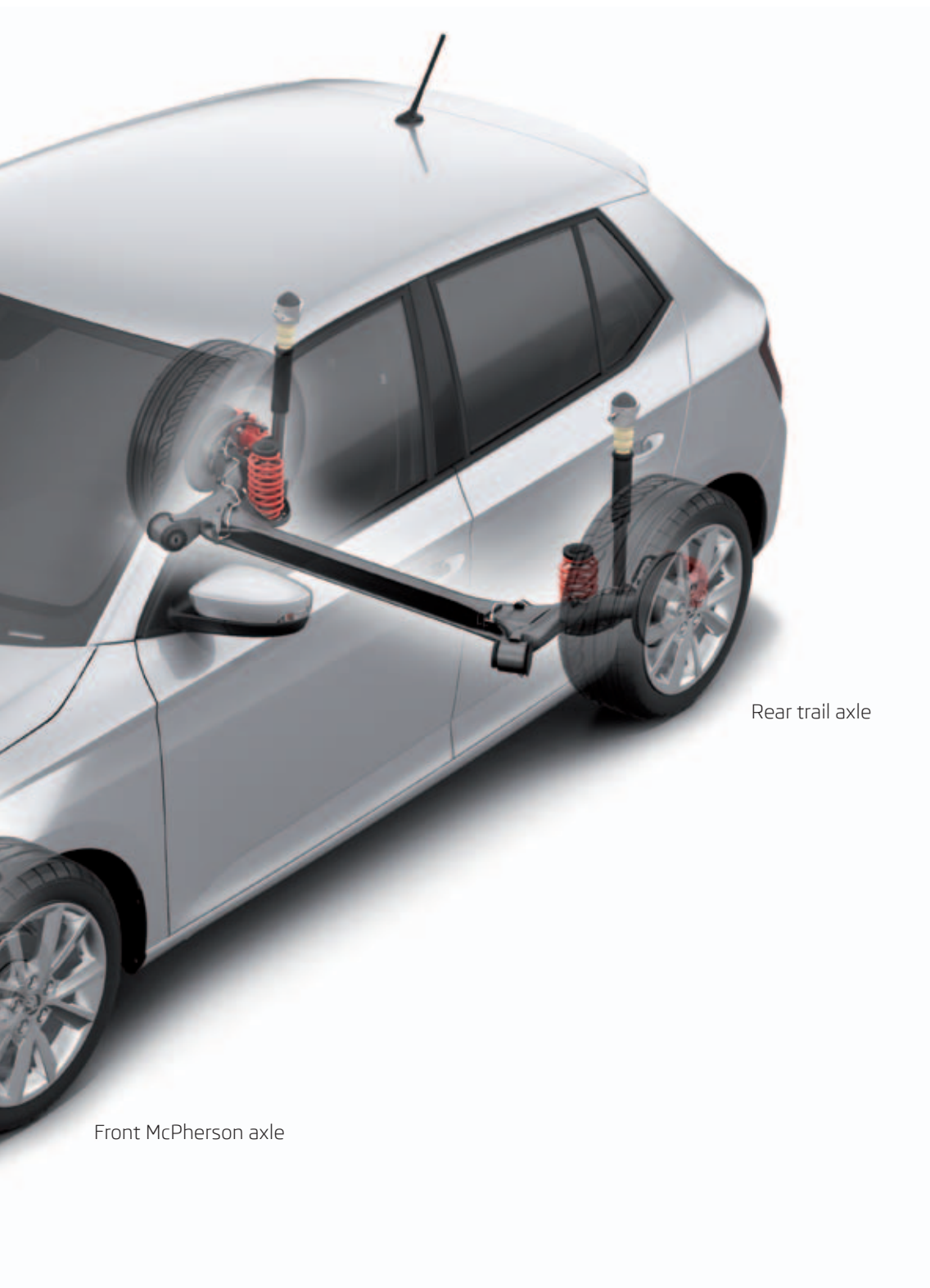
6 Chassis

6.1 Front and Rear Axles

The ŠKODA Fabia III model features the McPherson front axle. A simpler design trail axle is used in the back.



SP103_11



Front McPherson axle

Rear trail axle

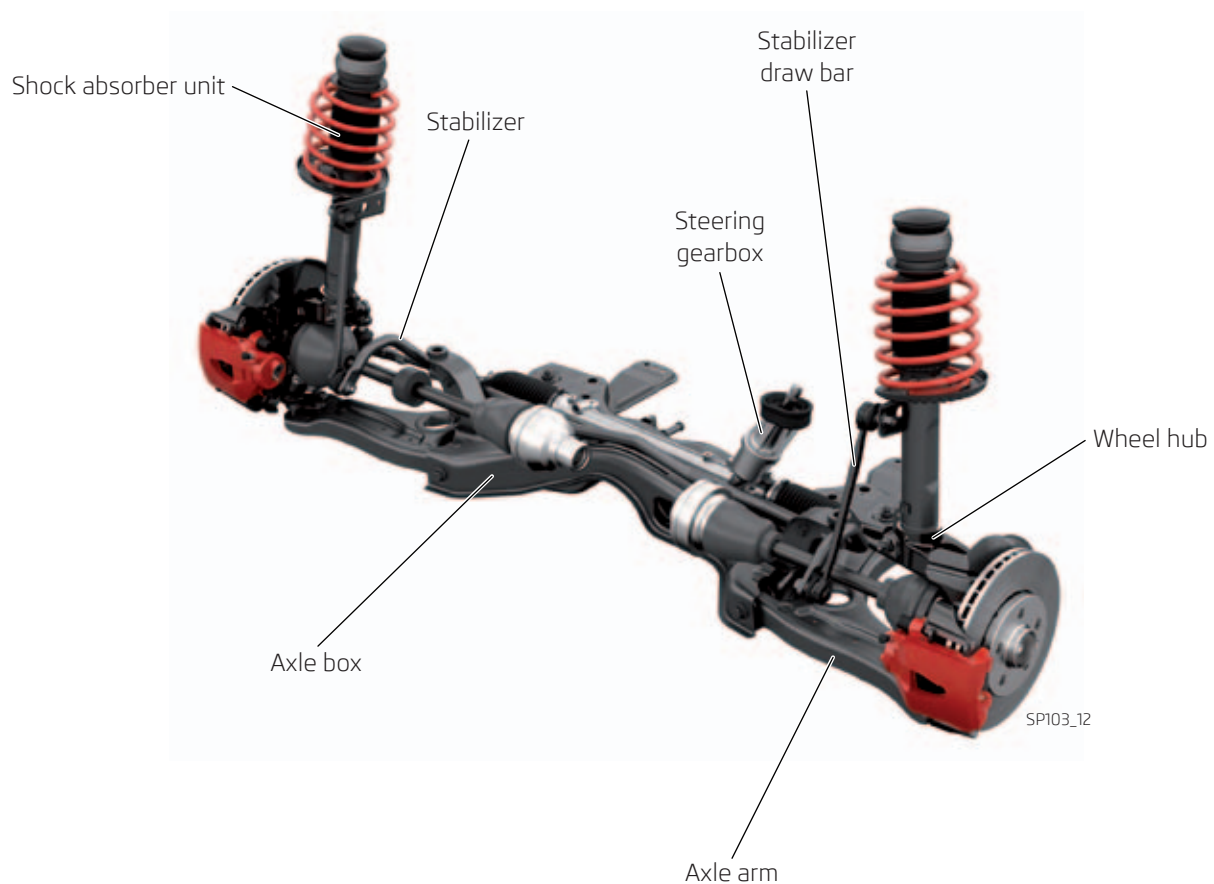
6.2 Front McPherson Axle

Use was made of the kinematically independent type of McPherson suspension for the front driven wheels. The same axle is used in the ŠKODA Rapid model.

Each side of the axle is formed by a triangular arm and a shock absorber unit. The telescopic absorber's axis is used as the top pivot of a wheel suspension. It has the kingpin's function.

Front axle characteristic:

- Independent front wheel suspension with a good driving stability - double-row ball bearing with oblique contact screwed to the wheel hub - disc brakes with inner cooling



Axle arm

Compared to the previous version, ŠKODA Fabia II, the axle arms of the new Fabia III are more robust and 15 mm wider.

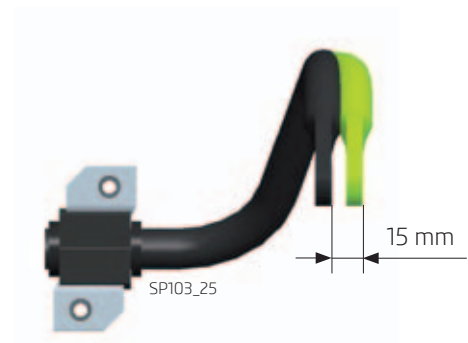
Axle box

Compared to the previous ŠKODA Fabia II version, the ŠKODA Fabia III model features the new locations of exhaust piping suspension points on the axle box. Two suspension lugs are newly located on the axle box rear side. The reason is the use of the MOB and MDB engines with exhaust piping already routed from their rear side.



Stabilizer

The ŠKODA Fabia III vehicle features two types of stabilizers, both with 18 mm diameter. Their lengths are different. The longer variant is installed into vehicles with six-speed and seven-speed automatic gearboxes since these larger gearboxes require more room for installation (plus 2 x 15 mm).



Wheel hub

The new ŠKODA Fabia III model features two wheel hub types, based on installed disc brakes.



Wheel hub for 14" FSIII disc brakes



Wheel hub for 15" FN3 disc brakes

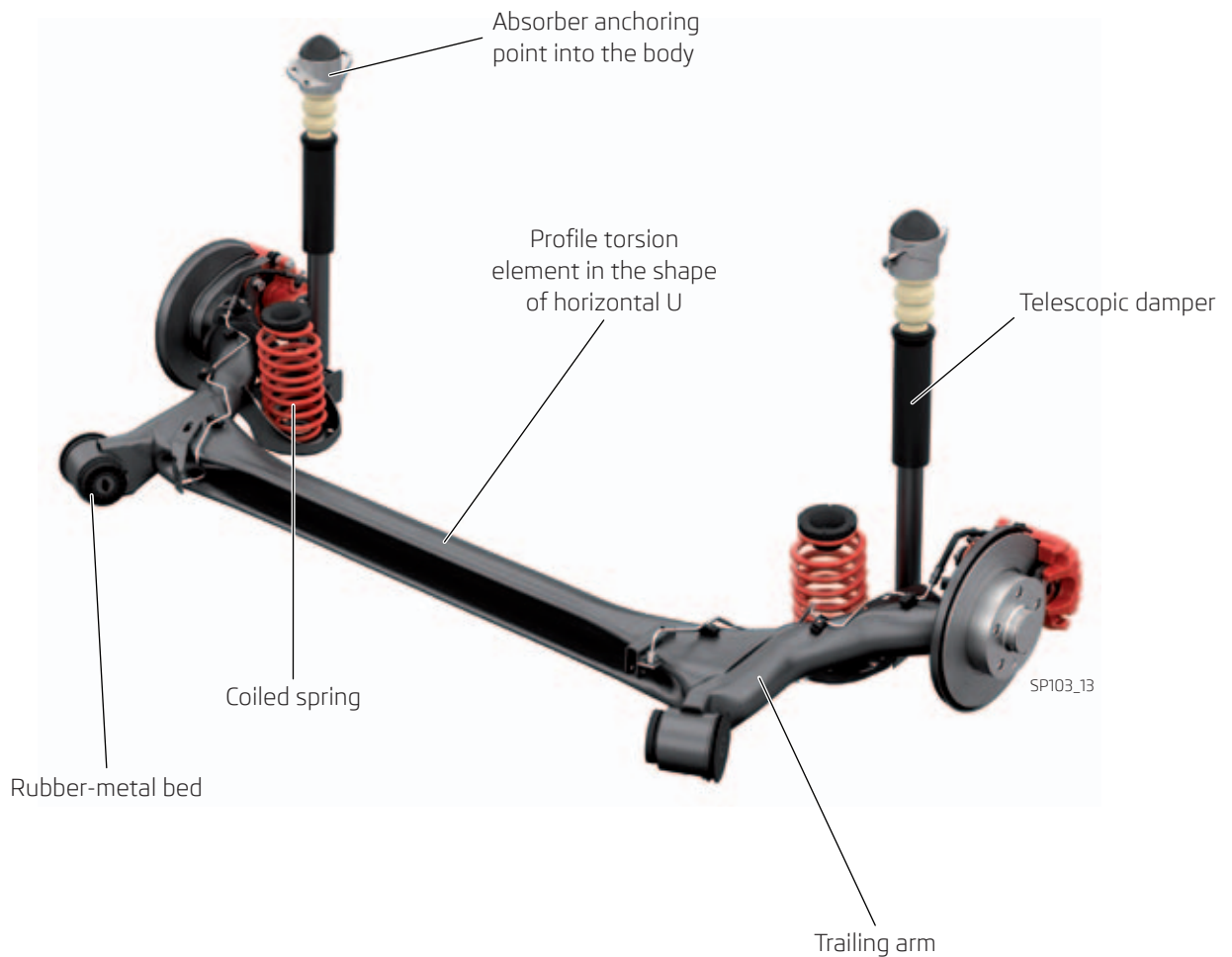
6.3 Rear Trail Axle

The ŠKODA Fabia III features a real trail axle.

The axle is composed of two trailing arms that are connected by a transverse torsion element. The torsion element in the shape of a U-profile in this axle has the stabilizer function as well. The axle body is connected at its front end to the car body using a pair of rubber-metal beds. The axle springs are anchored in their bottom part into the steel beds that are fixed to the trailing arms. The upper part of springs leans against the longitudinal members of the car body.

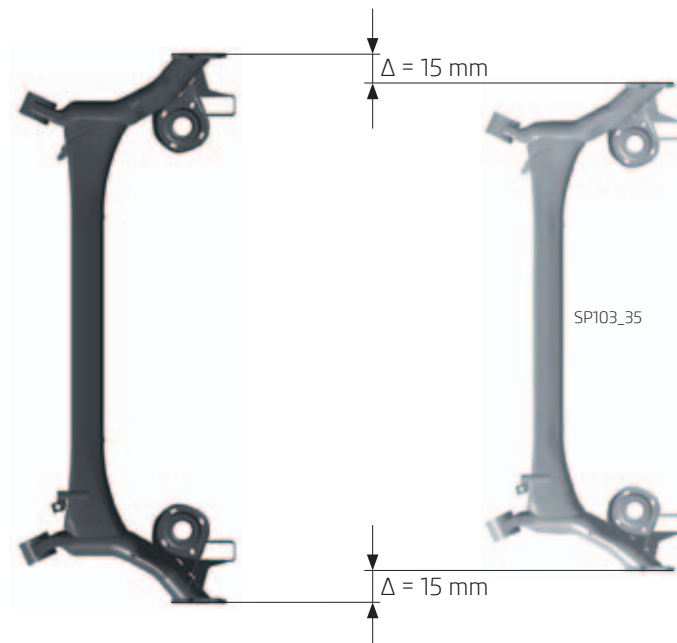
Rear axle characteristic:

- Crank axle with two trailing arms interconnected by a torsion element - the arms hold coiled springs and telescopic absorbers - disc or drum brakes are used on the rear axle (based on the engine type, market, and vehicle equipment)



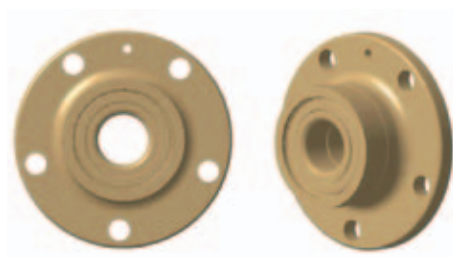
Axle width

Compared to the previous rear trail axle version in the ŠKODA Fabia II, the ŠKODA Fabia III model features a 30 mm wider axle (15 mm on each side). The designed axle bearing capacity is 800 kg. The ŠKODA Fabia III Combi version features an axle variant with a greater bearing capacity of 840 kg.



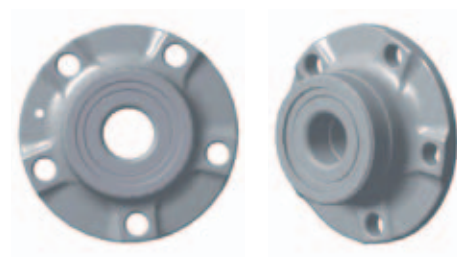
Rear axle bearings

Two bearing types support the rear axle wheels. The basic bearing variant is used in the short version of the ŠKODA Fabia III model. The other, more robust bearing variant with a greater bearing capacity, is used in the rear axle of the ŠKODA Fabia III Combi vehicle.



SP103_36A

ŠKODA Fabia III
Bearing bearing capacity: 800kg



SP103_36B

ŠKODA Fabia III Combi
Bearing bearing capacity: 840kg

7 Brake System

The ŠKODA Fabia III vehicle is equipped with a double-circuit brake system with diagonal arrangement and the vacuum-operated brake booster.

Division of the system into two separated brake circuits increases car safety during braking.

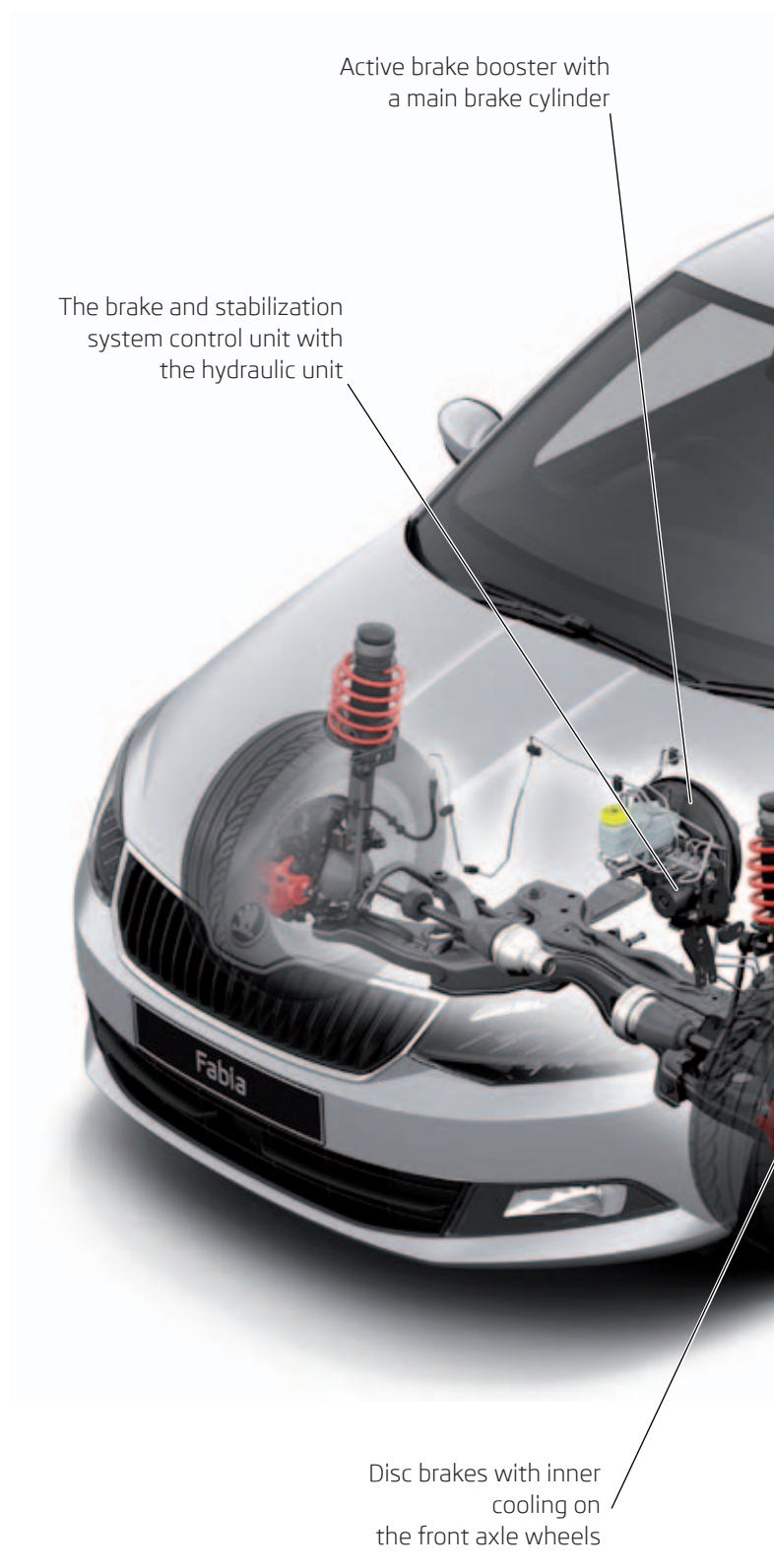
With one circuit faulty, use is made of the other circuit that can be applied to stop the car.

The brake and stabilization system control unit is located on the left hand side of the engine compartment to form a common assembly with the hydraulic unit.

The car is equipped with a standard hand brake, the hand brake control lever is connected with the rear brake mechanism by Bowden cables.

The front axle is fitted with disc brakes and single-piston floating caliper. The front brake discs are hollow with inner cooling. Based on the installed engine, discs with 256 mm diameter and 22 mm thickness or discs with 288 mm diameter and 25 mm thickness are used.

The rear axle features drum or disc brakes, based on the engine type and target region.

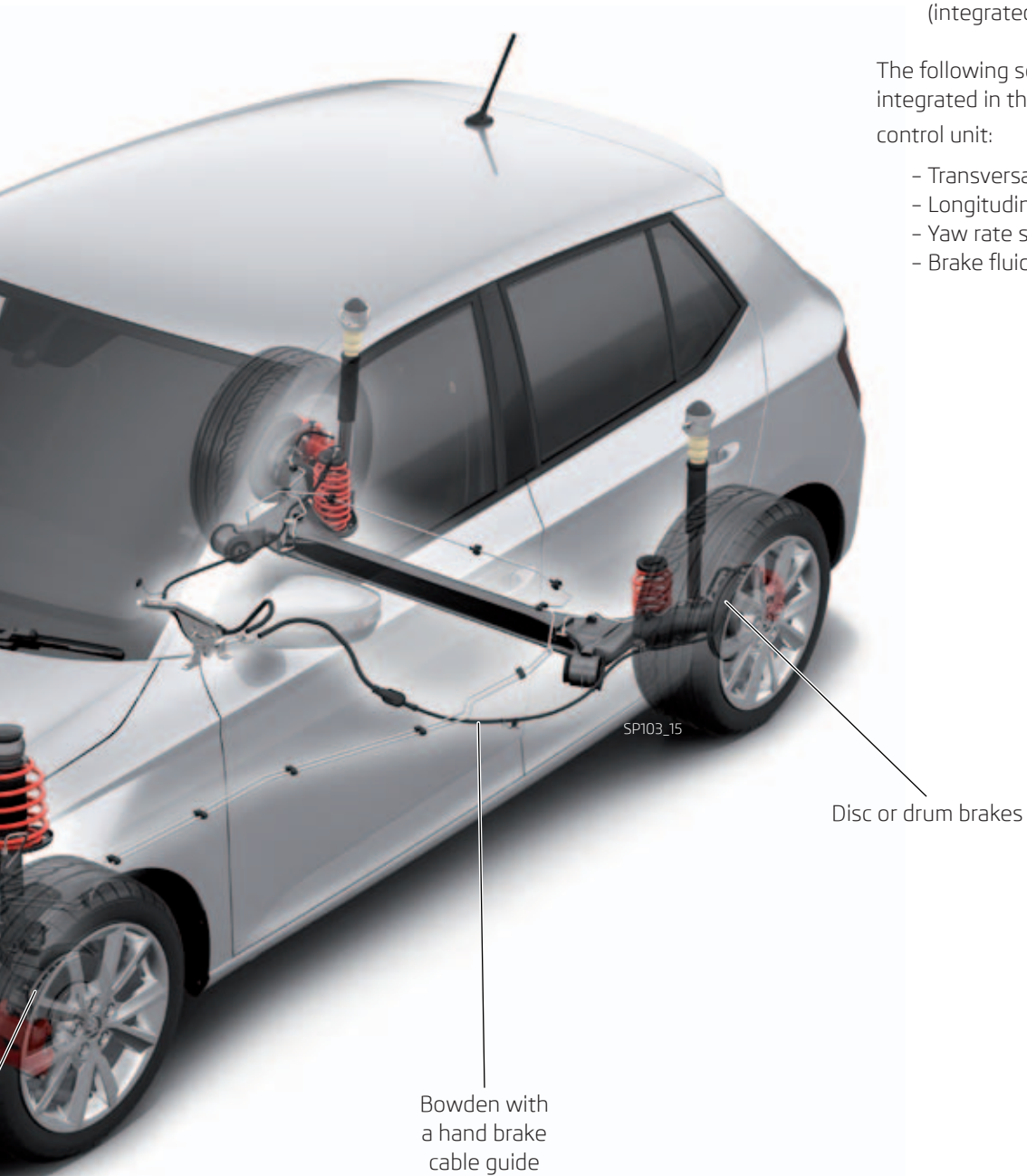


The brake system is further composed of the following sensors the signals of which form variables when the brake and stabilization function algorithms are calculated:

- Four speed sensors
(on individual wheels)
- Steering wheel turning angle sensor
(integrated in the steering gearbox)

The following sensors are directly integrated in the ESC – BOSCH 9.0 control unit:

- Transversal acceleration sensor
- Longitudinal acceleration sensor
- Yaw rate sensor
- Brake fluid pressure sensor



7.1 Control Unit of the Brake and Stabilization Systems

Since the beginning of its mass production, the ŠKODA Fabia III vehicle features the only ESC – **BOSCH 9.0 control unit**.

The control unit forms a single assembly with the hydraulic unit and hydraulic pump electric motor.

The ESC – BOSCH 9.0 control unit features advanced brake and stabilization functions. Their detailed summary is available in the following table.

The ESC – BOSCH 9.0 control unit runs these functions:	
EBV	Electronic braking effect distribution
ASR	Driven wheel slippage control
MSR	Engine braking moment control
EDS	Electronic differential lock
HBA	Hydraulic brake assistant
RBS	Brake disc drying
RKA Plus	Tyre pressure monitoring
HHC	Hill hold control
XDS Plus	Extended electronically controlled differential locking
SLS	Stabilization of braking at high speeds
CBC	Stabilization during braking in curve
MKB	Multi-collision braking function
HBV	Hydraulic braking effect boosting
ANB	Automatic emergency braking (in connection with radar – Frontassist)

Sensors integrated in the BOSCH 9.0 control unit

ESC units feature the following integrated sensors:

- Transversal acceleration sensor
- Longitudinal acceleration sensor
- Yaw rate sensor
- Brake fluid pressure sensor

7.2 Location of the Control Unit of the Brake and Stabilization Systems

The control unit is located in the left section of the engine compartment both of LHD and RHD vehicles.



SP103_14

7.3 Description of the Selected Functions of the ESC Control Unit - BOSCH 9.0

7.3.1 XDS Plus - Extended Electronically Controlled Differential Locking

While driving through a turn, the XDS Plus function brakes the inner wheels (front ones, but newly the rear ones as well). Resultantly, driving moment is transmitted to the outer wheels. The result is more effective traction and also greater yaw moment around the vertical axis. In the past ŠKODA Fabia II vehicle generation, the XDS system would only act at greater lateral acceleration rates, for example, during more aggressive driving on a dry road. The function did not work on slippery surfaces, where it could have improved vehicle controllability.

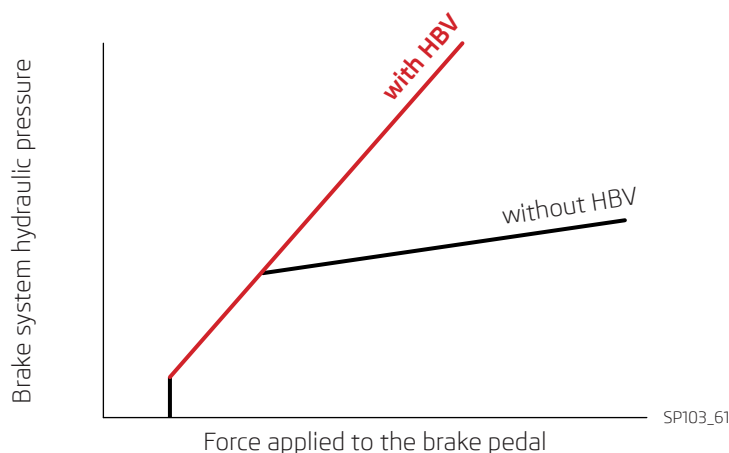
That is why the new ŠKODA Fabia III features the improved XDS **Plus** system. The improved function transmits torque to the outer wheels already during low lateral acceleration rates. Resultantly, it improves power transmission, for example, on a wet road.

The XDS Plus function works, regardless of the gas pedal position.

7.3.2 HBV - Braking Effect Hydraulic Boosting

The ESC control unit monitors the actual underpressure and pressure in the brake system. If it identifies low underpressure, the ECS unit hydraulically boosts the braking effect up to 150 bar.

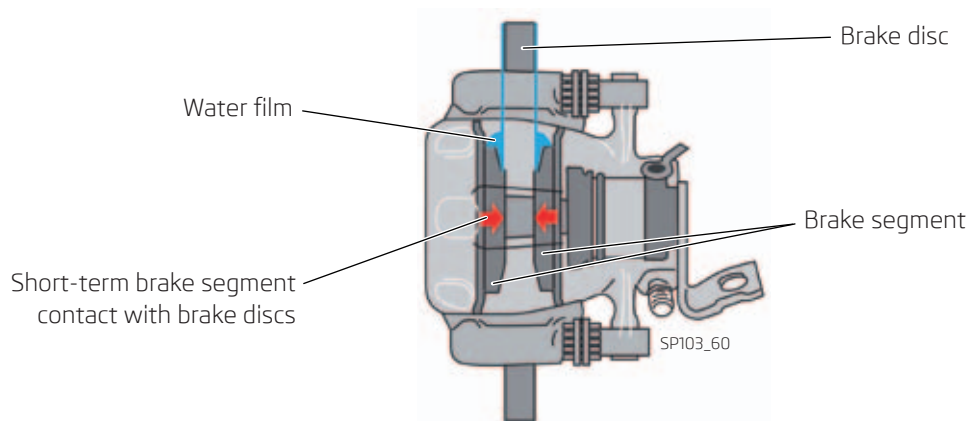
The HBV function comes with petrol engines combined with automatic gearboxes.



7.3.3 RBS - Brake Disc Drying

When it is raining, a thin water film may develop on brake discs. In such a case, the water film delays the brake effect. Brake segments slide on the water film until heated water evaporates or until it is removed by the brake segments. Only then a full brake effect becomes possible.

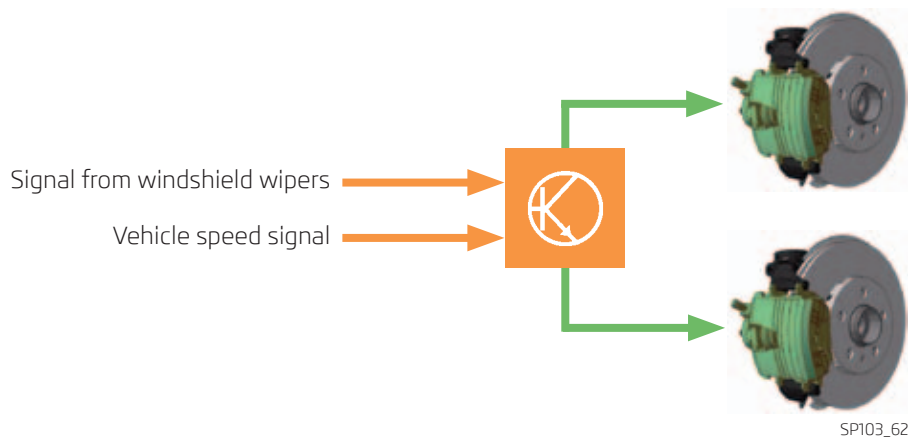
For this reason, the RBS assistance system – brake disc drying was developed. The function shortens the brake effect delay while driving in a rain. It is achieved by short-term mild contacts between the brake segments and brake discs, while the driver senses no vehicle deceleration. Resultantly, the brake discs get dry, full brake effect becomes available, and the vehicle braking distance may be shortened.



RBS function activation conditions:

- Vehicle reaches a specific speed (70 km/h)
- Windshield wipers engaged

If these two conditions are met, this function is activated during permanent or interval windshield wiper operation at specified intervals. The brake pressure for the RBS function is limited to the maximum pressure of 2 bar. Upon a single wipe, the braking process takes place only once.



7.4 Brakes

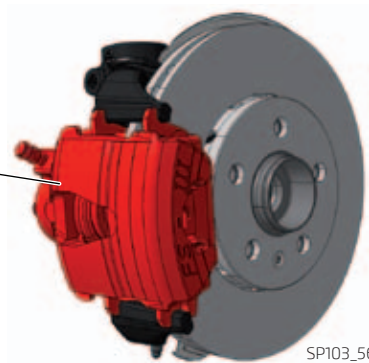
7.4.1 Installed Brakes Specification

Front axle	14" FSIII brake - Front axle - ŠKODA Fabia III	
	Type	Disc brake
	Piston (diameter)	54 mm
	Brake lining	Galfer 4595
	Brake disc (diameter x thickness)	256 x 22mm
	15" FN3 brake - Front axle - ŠKODA Fabia III	
	Type	Disc brake
	Piston (diameter)	54 mm
Rear Axle	Brake lining	Jurid 201
	Brake disc (diameter x thickness)	288 x 25mm
	Drum brake - rear axle - ŠKODA Fabia III	
	Type	Drum brake
	Brake cylinder (diameter)	19 mm
	Brake lining	Ferodo 3629/2
	Drum (diameter x thickness)	200 x 40mm
	Brake C38 - rear axle - ŠKODA Fabia III	
	Type	Disc brake
	Piston (diameter)	38 mm
	Brake lining	Galfer 4553-1
	Brake disc (diameter x thickness)	230 x 9mm

7.4.2 Overview of Installed Brakes Based on Engine Type

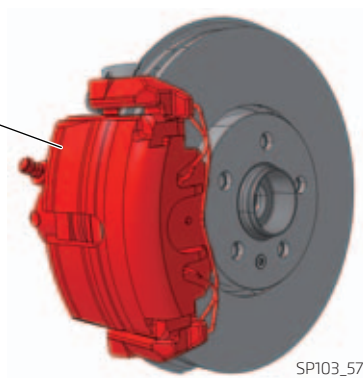
		1.0 MPI / 44 kW	1.0 MPI / 55 kW	1.2TSI/66kW	1.2TSI/81kW	1.4 TDI / 55 kW GL (Greenline)	1.4TDI/66kW	1.4TDI/77kW
Front axle	FSIII	●	●	●		●	●	
	FN3				●			●
Rear Axle	Drum brake	●	●	●			●	●
	C38			●	●	●	●	●

- - The rear axle disc brake variant depends on the market and vehicle equipment.



Brake 14" FSIII – Front axle

SP103_56



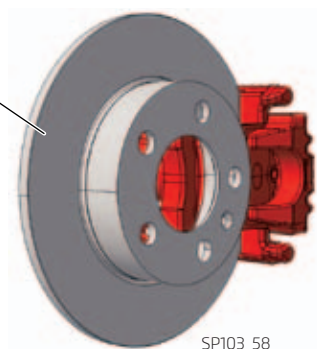
Brake 15" FN3 – Front axle

SP103_57



Drum brake – rear axle

SP103_59



Brake C38 – rear axle

SP103_58

8 Wheels and Rims

The ŠKODA Fabia III car is equipped with the following series of steel and aluminium wheels.

8.1 Steel Wheels with Full Covers



8.2 Light Alloy Wheels





8.3 Table of Tire and Rim Combinations

Engines	Tyre Size	Bearing Index	Speed Category
1.0 I/55 kW MPI	175/70 R14	84	T
	185/60 R15		
	215/45 R16	86	
	215/40 R17	87	
1.2 I/66 kW TSI	175/70 R14	84	T
	185/60 R15		
	215/45 R16	86	
	215/40 R17	87	
1.2 I/81 kW TSI	185/60 R15	84	H
	215/45 R16	86	
	215/40 R17	87	
1.4I/66 kW TDI CR	175/70 R14	84	T
	185/60 R15		
	215/45 R16	86	
	215/40 R17	87	

9 Engines

9.1 ŠKODA Fabia III with MOB and MDB Engines

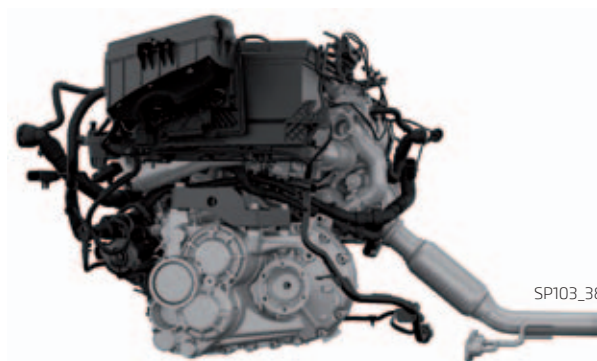
Despite the fact that the ŠKODA Fabia III is not completely built on the MQB platform – it is the PQ26 platform, the vehicle features a modular concept to enable its successors to be fully based on the planned VW Group-wide platform. That is why the Fabia III exclusively features the MOB and MDB engines. Compared to the MQB platform engine, the Fabia III model engines are inclined differently.

Aggregate mounting positions in the PQ26 platform – ŠKODA Fabia III

PQ26 - 1,0 l MPI / 44, 55 kW	15° back + 1° to the side
PQ26 - 1,2 l TSI / 66 kW, 81 kW	15°; 13.5° back + 3° to the side*
PQ26 - 1,4 l TDI / 66, 77 kW	15° back + 3° to the side

* Engine inclined back by 15° or 13.5°, based on the installed gearbox

Comment: The MOB and MDB engines are identically inclined in the MQB platform (PQ12): 12° back (around the crankshaft axis) + 0° to the side (transversally).



9.2 Table of Installed Engines

The third generation ŠKODA Fabia vehicles at the beginning of its mass production features the following engines: Petrol **1.0 MPI** and **1.2 TSI** engines and **1.4 TDI diesel engine**. Each of these engines features two output variants. All the drive units feature the START-STOP and braking energy recuperation systems, as standard equipment. (Applies to the engines compliant with the EU6 emission standard.)

Petrol engines - ŠKODA Fabia III	number of cylinders	emission standard	series
1.0 MPI / 44 kW	3	EU 6	EA211
1.0 MPI / 55 kW	3	EU 6	EA211
1.2TSI/66kW	4	EU 6	EA211
1.2TSI/81kW	4	EU 6	EA211

1.0 I MPI



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1.2 I TSI



SP103_43

Diesel engines - ŠKODA Fabia III	number of cylinders	emission standard	series
1.4TDI/66kW	3	EU 6	EA288
1.4TDI/77kW	3	EU 6	EA288

1.4 I TDI



SP103_47

9.3 Parameters of the 1.0 I MPI 44 kW and 55 kW Engines

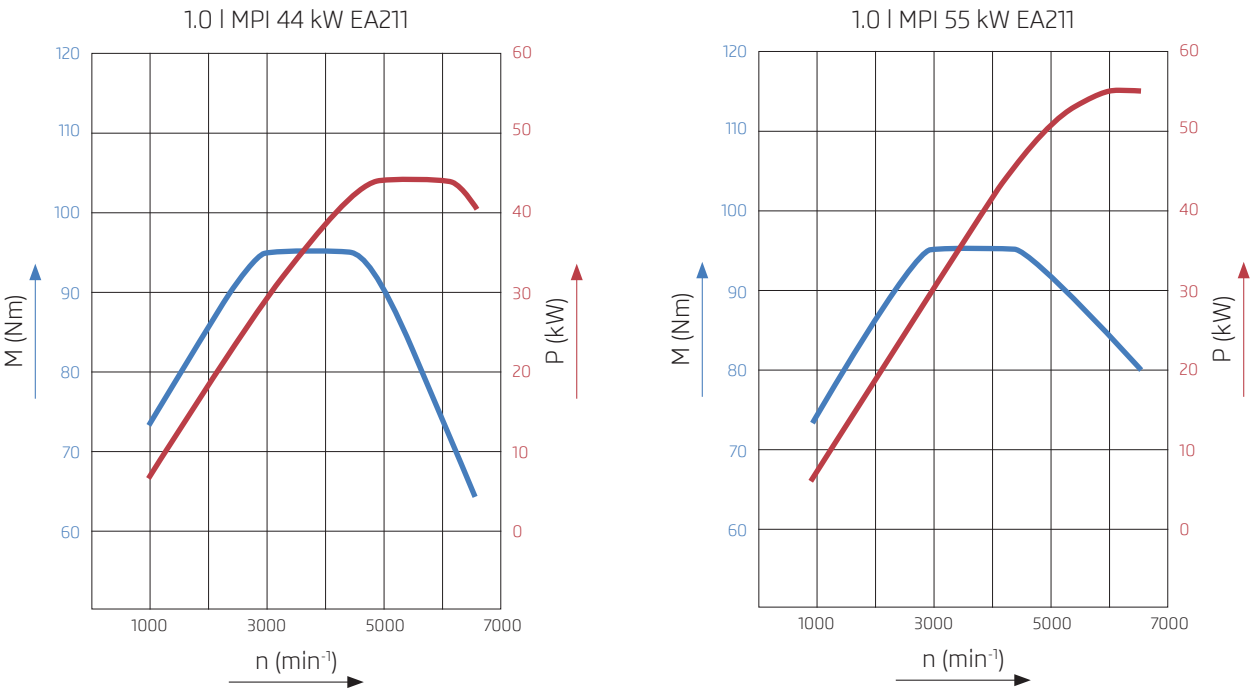
The three-cylinder 1.0 I MPI 55 kW engine is the smallest petrol engine for the ŠKODA Fabia III vehicle. This engine is mechanically based on the engine used in the ŠKODA Citigo vehicles; however, it is modified for the PQ26 platform and higher emission standard.

Engine Parameters	Power version of the 1.0 I MPI engine	
	44 kW MPI (Engine code: CHYA)	55 kW MPI (Engine code: CHYB)
Structure	Spark ignition three-cylinder engine with indirect fuel injection, liquid cooled, two camshafts in the cylinder head cover (2x OHC), cogged belt-driven timing mechanism, transverse front mounted	
number of cylinders	3	3
Displacement	999 cm ³	999 cm ³
Bore	74.5 mm	74.5 mm
Stroke	76.4 mm	76.4 mm
Cylinder pitch	82 mm	82 mm
Number of valves per cylinder	4	4
Max. power	44 kW at 5000–6000 min⁻¹	55 kW at 6200 min⁻¹
Max. torque	95 Nm at 3000–4300 min⁻¹	95 Nm at 3000–4300 min⁻¹
Compression ratio	10.5 : 1	10.5 : 1
Charging	Electronically controlled indirect fuel injection	
Lubrication	Force feed lubrication with through-flow oil filter	
Fuel	Unleaded petrol of min. oct. No. 95*	Unleaded petrol of min. oct. No. 95*
Emission standard	EU 6	EU 6

* In exceptional cases, it is possible to use octane number 91 petrol; however, reduced power must be considered.



9.3.1 Performance and Torque Characteristics of the 1.0 I MPI 44 kW and 55 kW Engines



P – Power, M – Torque, n – Engine speed

■ Engine torque curve

■ Engine power curve



SP103_40

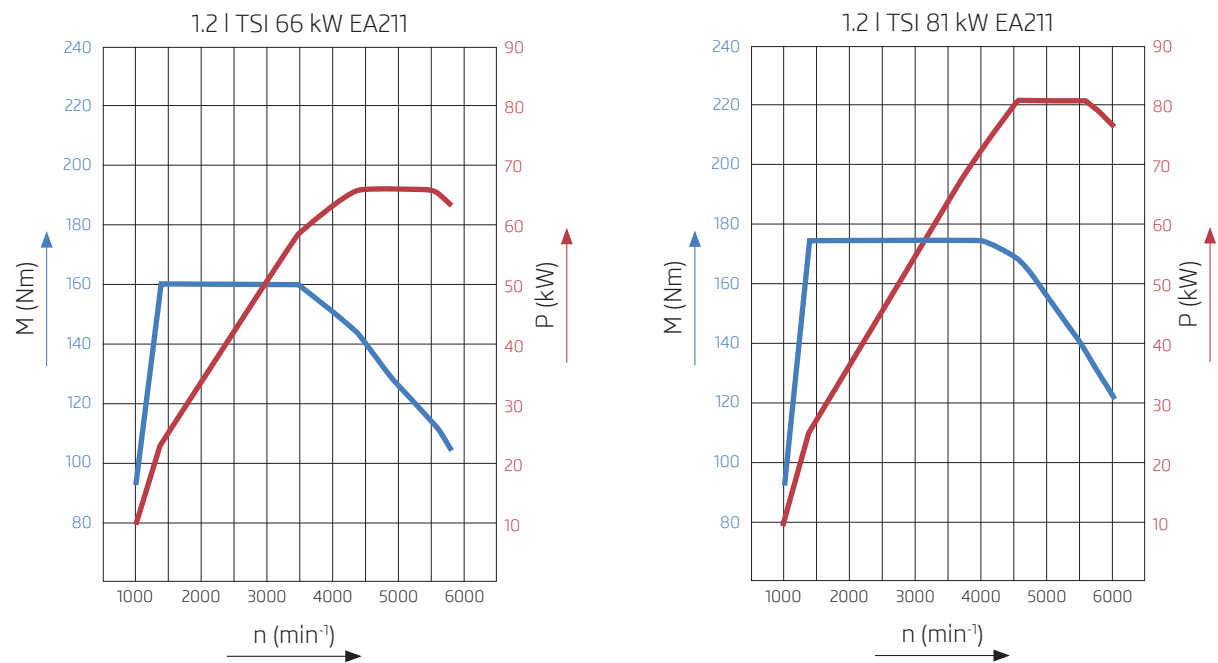
9.4 Parameters of the 1.2 I TSI 66 kW and 81 kW Engines

This engine is mechanically based on the engine used in the ŠKODA Octavia III vehicles; however, it is modified for the PQ26 platform and higher emission standard.

Engine Parameters	Power version of the 1.2 I TSI engine	
	66 kW (Engine code: CJZC)	81 kW (Engine code: CJZD)
Structure	inline spark ignition four-cylinder engine with direct fuel injection, turbocharged, liquid cooled, two camshafts in the cylinder head cover (2x OHC), cogged belt-driven timing mechanism, transverse front mounted	
number of cylinders	4	4
Displacement	1197 cm ³	1197 cm ³
Bore	71 mm	71 mm
Stroke	75.6 mm	75.6 mm
Cylinder pitch	82 mm	82 mm
Number of valves per cylinder	4	4
Max. power	66 kW at 4400-5400 min⁻¹	81 kW at 4600-5600 min⁻¹
Max. torque	160 Nm at 1,400-3,500 min⁻¹	175 Nm at 1,400-4,000 min⁻¹
Compression ratio	10.5 : 1	10.5 : 1
Charging	Electronically controlled direct fuel injection	
Lubrication	Force feed lubrication with through-flow oil filter	
Fuel	Unleaded petrol of min. oct. No. 95	
Emission standard	EU 6	EU 6



9.4.1 Performance and Torque Characteristics of the 1.2 I TSI 66 kW and 81 kW Engines



P – Power, M – Torque, n – Engine speed

■ Engine torque curve

■ Engine power curve



SP103_50

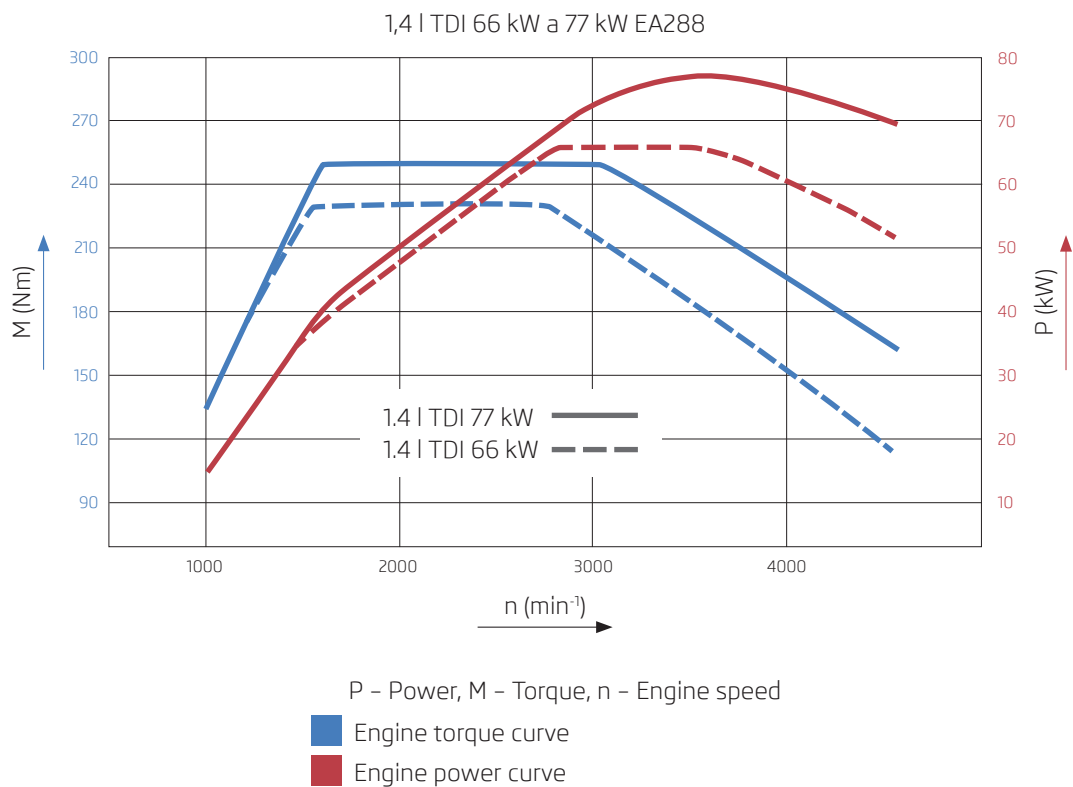
9.5 Parameters of the 1.4 I TDI 66 kW and 77 kW Engines

A new diesel engine was developed for small VW Group vehicles, starting with the new VW Polo and ŠKODA Fabia III models. Its designers focused on fuel economy meeting the strict EU 6 standard. The modern three-cylinder engine is designed with an aluminium cylinder block. A cogged belt drives the camshafts. A gear assembly drives a balancing shaft, which secures the three-cylinder engine's quiet operation. The catalytic converter module with its solid particle filter and electronically controlled dual-circuit EGR system make sure the EU6 standard is met.

Engine Parameters	Power version of the 1.4 I TDI Engine	
	66 kW (Engine code: CUSB)	77 kW (Engine code: CUTA)
Structure	inline diesel three-cylinder engine with direct high-pressure fuel injection, turbocharged, liquid cooled, two camshafts in the cylinder head cover (2x OHC), cogged belt-driven timing mechanism, transverse front mounted	
number of cylinders	3	3
Displacement	1422 cm ³	1422 cm ³
Bore	79.5 mm	79.5 mm
Stroke	95.5 mm	95.5 mm
Number of valves per cylinder	4	4
Max. power	66 kW at 3,000–3,250 min⁻¹	77 kW at 3,500–3,750 min⁻¹
Max. torque	230 Nm at 1,500–2,500 min⁻¹	250 Nm at 1,750–2,500 min⁻¹
Compression ratio	16.2 : 1	16.2 : 1
Charging	Electronically controlled high-pressure injection by the Common-Rail system (Delphi)	
Lubrication	Force feed lubrication with through-flow oil filter	
Fuel	Diesel fuel	Diesel fuel
Emission standard	EU 6	EU 6
Balance shaft	YES	YES



9.5.1 Performance and Torque Characteristics of the 1.4 I TDI 66 kW and 77 kW Engines



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10 Gearboxes

10.1 Overview of Gearboxes, Gear Ratio Tables

Gearboxes in connection with petrol engines

The three-cylinder naturally-aspirated 1.0 MPI/44 kW and 55 kW petrol engines use the OCF five-speed manual gearbox. Each of these two power variants comes with gearboxes featuring different gear ratios.

The 1.2 TSI/66 kW engine features the 02T five-speed manual gearbox. The higher (81 kW) power variant of this engine features the 02U six-speed gearbox and possibly the 0AM seven-speed automatic gearbox

The ŠKODA Fabia III model gearboxes in combination with petrol engines - gearing characteristics

	OCF (MQ100-5F) 1.0 MPI/44 kW	OCF (MQ100-5F) 1.0 MPI/55 kW	02T (MQ200-5F) 1.2 TSI/66 kW	02U (MQ200-6F) 1.2 TSI/81 kW	0AM (DQ200-7F) 1.2 TSI/81 kW
Final drive (permanent gear)	4.81	4.81	3.63	3.93	4.105*/3.12**/3.90***
1st Speed Gear	3.64	3.64	3.77	3.62	3.76
2st Speed Gear	1.96	1.96	1.95	1.95	2.37
3rd Speed Gear	1.21	1.27	1.28	1.28	1.58
4th Speed Gear	0.92	0.96	0.93	0.93	1.11
5th Speed Gear	0.76	0.80	0.74	0.74	1.14
6th Speed Gear	–	–	–	0.61	0.94
7th Speed Gear	–	–	–	–	0.78
Reverse gear	3.62	3.62	3.18	3.18	4.28

Final drive's gear ratio for: *Speed gear 1, 2, 3, and 4; gear **5, 6, and 7; *** for reverse gear.

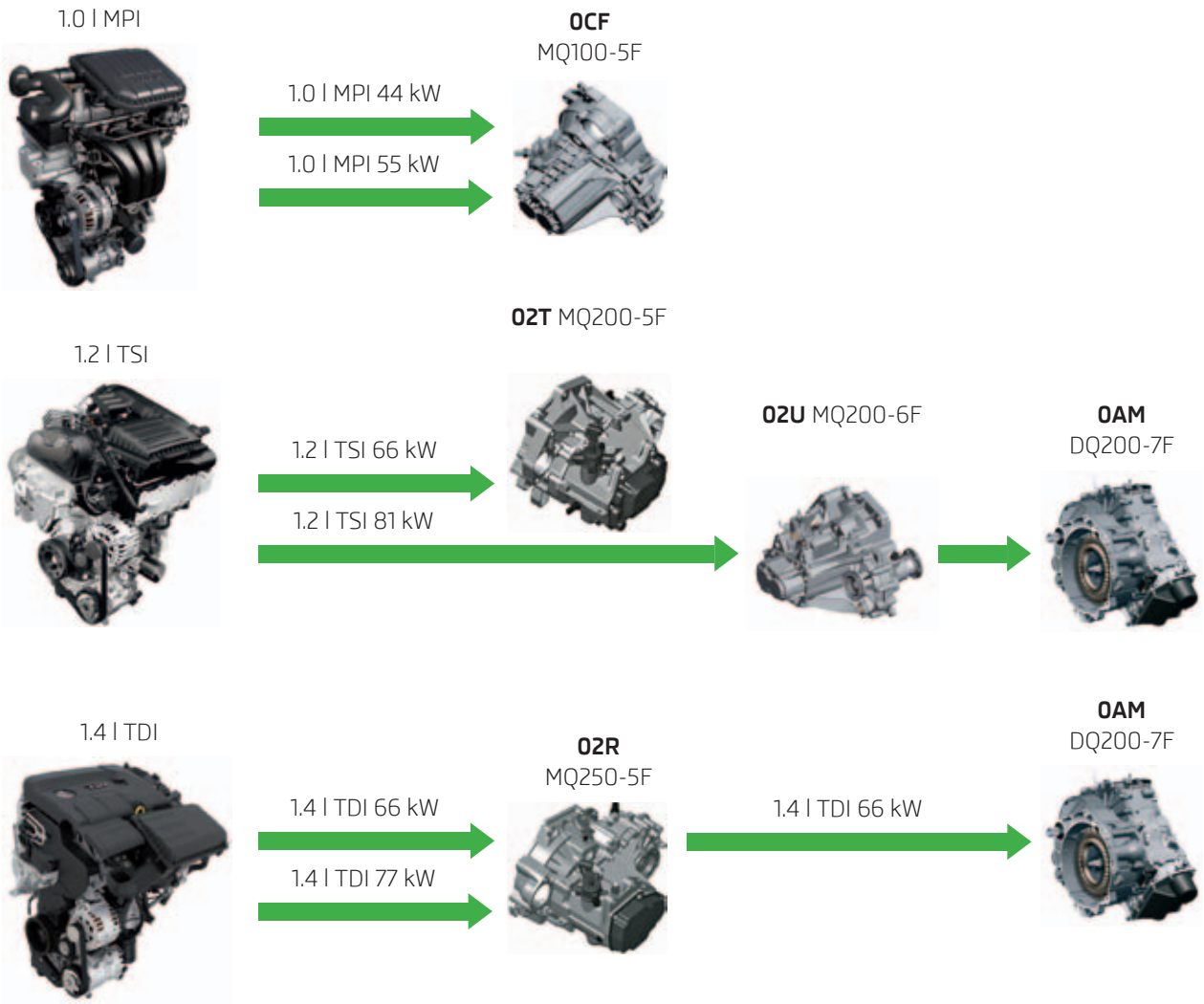
Gearboxes combined with the 1.4 TDI 66 kW and 77 kW diesel engines

The greater torque generated by the 1.4 TDI diesel engine is transmitted by the 02R five-speed manual gearbox. The power variant of the 66 kW engine 1.4 TDI may also be combined with the 0AM automatic gearbox.

The ŠKODA Fabia III model gearboxes in combination with diesel engines - gearing characteristics

	02R (MQ250-5F) 1.4 TDI/66 kW and 1.4 TDI/77 kW	0AM (DQ200-7F) 1.4 TDI/66 kW
Final drive (permanent gear)	3.39	4.44*/3.23**/4.18***
1st Speed Gear	3.78	3.5
2nd Speed Gear	1.94	2.09
3rd Speed Gear	1.19	1.34
4th Speed Gear	0.82	0.93
5th Speed Gear	0.63	0.97
6th Speed Gear	–	0.78
7th Speed Gear	–	0.65
Reverse gear	3.60	3.72

10.2 Engine and Gearbox Combinations



Transmission	Engines					
	1.0 I MPI 44 kW	1.0 I MPI 55 kW	1.2 I TSI 66 kW	1.2 I TSI 81 kW	1.4 I TDI 66 kW	1.4 I TDI 77 kW
OCF MQ100-5F	●	●				
02T MQ200-5F			●			
02U MQ200-6F				●		
02R MQ250-5F					●	●
OAM DQ200-7F				●	●	

10.3 Gearbox Characteristics

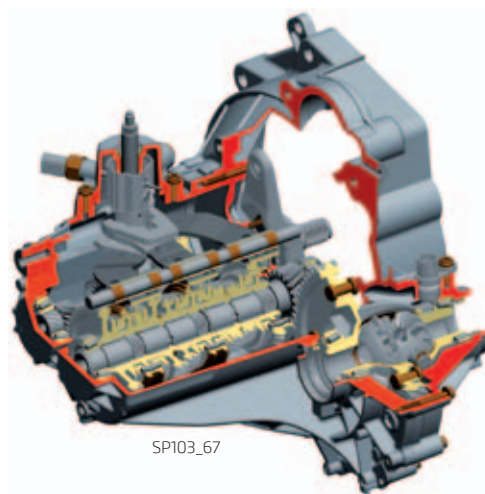
10.3.1 Five-Speed Mechanical Gearbox OCF (MQ100-5F)

During the development of this gearbox, the designers focused on its compactness, low weight, easy and precise shifting, and modular design. It is the smallest gearbox made by the VW Group.

The OCF five-speed mechanical gearbox features two shafts and one auxiliary stationary shaft for the supplemental reverse gear.

The forward speed gears are based on bevel teeth gear pairs. Flawless and quiet shifting is secured through forced synchronization. It covers all the forward speed gears. The synchronization is connected to the driven shaft.

The reverse gear features a set of straight and conical teeth with no synchronization. The gearbox housing also contains the distribution wheel and differential.



Detailed information on the OCF (MQ100-5F) gearbox is available in SSP No. 93

10.3.2 Five-Speed Mechanical Gearboxes O2T (MQ200-5F) and O2R (MQ250-5F)

These well-proven mechanical five-speed gearboxes are also used in other ŠKODA AUTO MODELS.

The O2T gearbox with production designation MQ200 is designed to transmit the 200 Nm torque. The O2R gearbox features a similar design. Its production designation is MQ250, and it is able to transmit 250 Nm torque - this gearbox is used in the ŠKODA Fabia III vehicle in combination with diesel engines.

The features of the 02T and 02R gearboxes

- Five forward speeds + one reverse speed
- Hydraulic clutch control
- Mechanical gearbox and final gear form one part
- To reduce internal friction, the gears of the individual speed gears feature needle bearings
- Double synchronization of the 1st and 2nd speed gears
- Internal shifting, i.e. shift forks, are designed as rocking. The shifting shaft is installed in the gearbox from above
- Permanent oil charge for the gearbox lifetime (no oil change necessary)
- The bolt for checking the oil condition and amount in the 02T gearbox is located in the differential area. In the 02R gearbox, it is located next to the gearbox housing cover.

10.3.3 Six-Speed Mechanical Gearbox 02U (MQ200-6F)

The 02U six-speed gearbox design is identical to the 02T and 02R five-speed gearbox designs. It is a two-shaft gearbox. The gear assembly of the drive and driven shafts is located in the joint housing together with the differential.

The synchronization mechanisms of gears 1 and 2 is located on the driven shaft. In the case of gears 3, 4, 5, and 6, it is on the drive shaft.

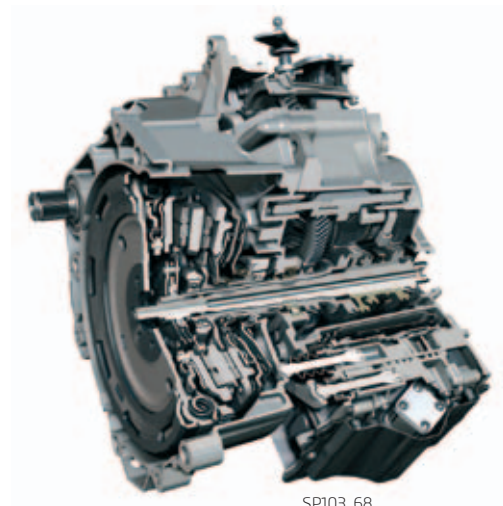
10.3.4 Automatic Gearbox 0AM (DQ200-7F)

The automatic gearbox with the 0AM dual clutch features two parts - odd and even. Each of these two parts is functionally designed like a mechanical gearbox, and each of them features one clutch. Both clutches form one set, and they are designed as dry clutches. They are controlled by mechatronics, based on the used speed gear.

The 0AM automatic gearbox is supplied for the ŠKODA Fabia III vehicle with the 1.2 TSI/81 kW petrol engine and 1.4 TDI/66 kW diesel engine.

The 0AM automatic gearbox features

- Dual dry clutch
- Separated oil circuits for gearbox and mechatronics
- Mechatronics control
- Possibility of manual gear shifting - high speed shifting - The first sub-part of the clutch shifts odd speed gears, and the other one shifts even speed gears and reverse gear
- Maximum transmitted torque of 250 Nm



Important:

More information on the diagnostics of the 0AM automatic gearbox is available in SSP No. 94.

Notes:

Overview of Hitherto Issued Workshop Teaching Aids

No. Name

- 1 Mono-Motronic
- 2 Central Locking
- 3 Car Alarm Equipment
- 4 Work with Wiring Diagrams
- 5 ŠKODA FELICIA
- 6 ŠKODA Car Safety
- 7 ABS - Basics - not issued
- 8 ABS - FELICIA
- 9 Starting Protection Device with Transponder
- 10 Air Conditioning in Car
- 11 FELICIA Air Conditioning
- 12 1.6 - MPI 11V Engine
- 13 Four-Cylinder Compression Ignition Engine
- 14 Power Steering
- 15 ŠKODA OCTAVIA
- 16 1.9 I TDI Compression Ignition Engine
- 17 ŠKODA OCTAVIA Comfort Electronics System
- 18 ŠKODA OCTAVIA 02K, 02J Mech. Gearbox
- 19 1.6 I and 1.8 I Gasoline Engines
- 20 Automatic Gearbox - Basics
- 21 01M Automatic Gearbox
- 22 1.9 I/50 kW SDI, 1.9 I/81 kW TDI
Compression Ignition Engines
- 23 1.8 I/110 kW and 1.8 I/92 kW Gasoline Engines
- 24 OCTAVIA, CAN-BUS Data Bus
- 25 OCTAVIA - CLIMATRONIC
- 26 OCTAVIA - Vehicle Safety
- 27 OCTAVIA - 1.4 I/44 kW Engine and 002 Gearbox
- 28 OCTAVIA - ESP - Basics, Design, Function
- 29 OCTAVIA 4 x 4 - All-Wheel Drive
- 30 2.0 I 85 kW and 88 kW Gasoline Engines
- 31 Radio Navigation System - Design and Function
- 32 ŠKODA FABIA - Technical Information
- 33 ŠKODA FABIA - Electrical Devices
- 34 ŠKODA FABIA - Electrohydraulic Power Steering
- 35 1.4 I - 16 V 55/74 kW Gasoline Engines
- 36 ŠKODA FABIA - 1.9 I TDI Pump-Nozzle
- 37 02T and 002 Mechanical Gearbox
- 38 ŠKODA Octavia; Model 2001
- 39 Euro-On-Board-Diagnose
- 40 001 Automatic Gearbox
- 41 02M Six-Speed Gearbox
- 42 ŠKODA Fabia - ESP
- 43 Emissions in Exhaust Gases
- 44 Extended Service Intervals
- 45 1.2 I Three-Cylinder Spark-Ignition Engines
- 46 ŠKODA Superb; Presentation of the Vehicle, Part I
- 47 ŠKODA Superb; Presentation of the Vehicle, Part II
- 48 ŠKODA Superb; V6 2.8 I/142 kW Spark-Ignition Engine
- 49 ŠKODA Superb; V6 2.5 I/114 kW TDI
Compression Ignition Engine
- 50 ŠKODA Superb; 01V Automatic Gearbox
- 51 2.0 I/85 kW Spark-Ignition Engine
with Balancing Shafts and 2-Stage Intake Pipe
- 52 ŠKODA Fabia; 1.4 I TDI Engine with Pump-Nozzle
Injection System
- 53 ŠKODA Octavia; Presentation of the Vehicle
- 54 ŠKODA Octavia; Electrical Components

No. Name

- 55 FSI Spark-Ignition Engines; 2.0 I/110 kW and 1.6 I/85 kW
- 56 DSG-02E Automatic Gearbox
- 57 Compression Ignition Engine; 2.0 I/103 kW TDI
with Pump-Nozzle Units, 2.0 I/100 kW TDI
with Pump-Nozzle Units
- 58 ŠKODA Octavia, Chassis and Electromechanical
Power Steering
- 59 ŠKODA Octavia RS, Engine 2.0 I/147 kW FSI Turbo
- 60 2.0 I/103 kW 2V TDI Compression Ignition Engine; Diesel
Particulate Filter with Additive
- 61 Radio Navigation Systems in ŠKODA Cars
- 62 ŠKODA Roomster; Presentation of the Vehicle, Part I
- 63 ŠKODA Roomster; Presentation of the Vehicle, Part II
- 64 ŠKODA Fabia II; Presentation of the Vehicle
- 65 ŠKODA Superb II; Presentation of the Vehicle, Part I
- 66 ŠKODA Superb II; Presentation of the Vehicle, Part II
- 67 Compression Ignition Engine; 2.0 I/125 kW TDI
with Common Rail Injection System
- 68 1.4 I/92 kW TSI Spark-Ignition Engine, Turbo Charged
- 69 3.6 I/191 kW FSI Spark-Ignition Engine
- 70 All-Wheel Drive with Generation IV Haldex Clutch
- 71 ŠKODA Yeti; Presentation of the Vehicle, Part I
- 72 ŠKODA Yeti; Presentation of the Vehicle, Part II
- 73 LPG System in ŠKODA Cars
- 74 1.2 I/77 kW TSI Spark-Ignition Engine, Turbo Charged
- 75 7-Speed Automatically Controlled Gearbox
with OAM Double Clutch
- 76 Green-Line Cars
- 77 Geometry
- 78 Passive Safety
- 79 Independent Heating
- 80 Compression Ignition Engines 2.0 I; 1.6 I; 1.2 I
with Common Rail Fuel Injection System
- 81 Bluetooth in ŠKODA Cars
- 82 Motor Vehicle Sensors - Drivetrain
- 83 1.4 I/132 kW TSI Spark-Ignition Engine,
Double Supercharged (Compressor, Turbobl原因)
- 84 ŠKODA Fabia II RS; Presentation of the Vehicle
- 85 KESSY System in ŠKODA Cars
- 86 START-STOP System in ŠKODA Cars
- 87 Immobilizers in ŠKODA Cars
- 88 Brake and Stabilization Systems
- 89 Sensors in ŠKODA Cars - Safety and Comfort
- 90 Customer Satisfaction Enhancement through CSS Study
- 91 ŠKODA Car Wiring Repairs
- 92 ŠKODA Citigo - Presentation of the Vehicle
- 93 Five-Speed OCF Mechanical Gearbox and ASG Automate
d Five-Speed Gearbox
- 94 OAM and 02E Automatic Gearbox Diagnostics
- 95 ŠKODA Rapid - Presentation of the Vehicle
- 96 ŠKODA Octavia III - Presentation of the Vehicle - Part I
- 97 ŠKODA Octavia III - Presentation of the Vehicle - Part II
- 98 ŠKODA Octavia III - Electronic systems
- 99 Engines 1.8 I TFSI 132 kW and 2.0 I TFSI 162 kW - EA888
- 100 1.6 I TDI and 2.0 I TDI; EA288 Design Series
- 101 EA211 series spark-ignition engines
- 102 CNG system in vehicles ŠKODA AUTO
- 103 ŠKODA Fabia III - Vehicle Introduction

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