Maintenance

Golf 2017 ➤
Golf Sportsvan 2018 ➤
Golf Variant 2017 ➤
e-Golf 2017 ➤

Edition 11.2021

Engines ⇒	Petrol engine	Petrol engine	Petrol engine	Petrol engine
Displacement l	2.0	2.0	2.0	1.5
Engine code	**DKTB**	**DLBA**	**DNUC**	**DPBA**
No. of cylinders/valves per cylinder	4/4	4/4	4/4	4/4
Power kW at rpm	180/5000-6200	180/5000-6200	213/5400-6500	96/5000-6000
Torque Nm at rpm	370/1600-4300	350/1500-4600	380/1950-5300	200/1400-4000
Bore ∅ mm	82.5	82.5	82.5	74.5
Stroke mm	92.8	92.8	92.8	85.9
Compression ratio	9.6	9.6	9.3	12.5
Injection/ignition	Motronic SIMOS TSI turbocharger	Motronic SIMOS TSI turbocharger	Motronic SIMOS TSI turbocharger	Bosch Motronic MG 1 TSI turbocharger
RON unleaded, at least	98 (in exceptional circumstances at least 95 RON, but with reduced output)	95	98 (in exceptional circumstances at least 95 RON, but with reduced output)	95
Particulate filter	Yes	no	Yes	Yes
Belt-driven starter-alternator	No	no	no	no
Camshaft drive	Chain	Chain	Chain	Toothed belt

Engines ⇒	Petrol engine
Displacement l	1.5
Engine code	**DPCA**
No. of cylinders/valves per cylinder	4/4
Power kW at rpm	110/5000-6000
Torque Nm at rpm	250/1500-3500
Bore ∅ mm	74.5
Stroke mm	85.9
Compression ratio	10.5
Injection/ignition	Bosch Motronic MG 1 TSI turbocharger
RON unleaded, at least	95
Particulate filter	Yes
Belt-driven starter-alternator	No
Camshaft drive	Toothed belt

Engines ⇒	Petrol engine	Petrol engine	Petrol engine	Petrol engine
Displacement l	2.0	2.0	2.0	2.0
Engine code	**CJXD**	**CJXG**	**DJHA**	**DJHB**
No. of cylinders/valves per cylinder	4/4	4/4	4/4	4/4
Power kW at rpm	213/5400-6500	228/5800-6500	228/5500-6500	213/5400-6500
Torque Nm at rpm	380/1850-5100	380/1850-5700	400/2000-6500	380/1850-5300

Engines ⇒	Petrol engine	Petrol engine	Petrol engine	Petrol engine
Displacement l	1.4	1.0	1.0	1.0
Engine code	**CHPB**	**CHZC**	**CHZF**	**CHZK**
Power kW at rpm	110/5000	81/5500	63/5000-5500	63/5000-6500
Torque Nm at rpm	250/1500-3500	175/1500-3500	160/1500-3500	175/1500-3500
Bore ∅ mm	74.5	74.5	74.5	74.5
Stroke mm	80.0	76.4	76.4	76.4
Compression ratio	10.5	10.5	10.5	10.5
Injection/ignition	Motronic MED17.5.21 TSI turbocharger	Motronic Bosch ME 17 TSI	Motronic Bosch ME 17 TSI	Motronic Bosch ME 17 TSI
RON unleaded, at least	95 (in exceptional circumstances at least 91 RON, but with reduced output)	95	95	95
Particulate filter	no	no	no	no
Belt-driven starter-alternator	no	no	no	no
Camshaft drive	Toothed belt	Toothed belt	Toothed belt	Toothed belt

Engines ⇒	Petrol engine	Petrol engine	Petrol engine	Petrol engine
Displacement l	1.4	1.4	1.4	1.5
Engine code	**CXSB**	**CZCA**	**CZDA**	**DACA**
No. of cylinders/valves per cylinder	4/4	4/4	4/4	4/4
Power kW at rpm	92/5000-6000	92/5000-6000	110/5000-6000	96/5000
Torque Nm at rpm	200/1400-3650	200/1400-4000	250/1500-3500	200/1400-4000
Bore ∅ mm	74.5	74.5	74.5	74.5
Stroke mm	80.0	80.0	80.0	85.7
Compression ratio	10.5	10.0	10.0	12.5
Injection/ignition	Motronic MED17.5.21 TSI turbocharger	Motronic MED17.5.21 TSI turbocharger	Motronic MED17.5.21 TSI turbocharger	Bosch Motronic MG 1 TSI turbocharger
RON unleaded, at least	95	95 (in exceptional circumstances at least 91 RON, but with reduced output)	95 (in exceptional circumstances at least 91 RON, but with reduced output)	95
Particulate filter	no	no	no	yes[1)]/no
Belt-driven starter-alternator	no	no	no	no
Camshaft drive	Toothed belt	Toothed belt	Toothed belt	Toothed belt

[1)] As of model year 2019 with particulate filter.

Oil change service	Inspection	Extended scope of inspection (recommended in addition to regular inspection)	Scope of work
	X		– Tyre Pressure Loss Indicator: calibrate after tyre pressure has been corrected.
	X		– Carry out road test.
X			– High-voltage battery: charge. • Applies only to PHEV
	X		– High-voltage battery: charge. • Applies only to BEV

2.2.3 Service intervals

Scope of work	Climate and traffic conditions usual for passenger vehicles operated on fuels compliant with EN 228 or EN 590/EN 15940	For operation with fuels that are »NOT« compliant with standards EN 228 ⇒ page 46 or EN 590/ EN 15940 ⇒ page 47
Oil change service	---	QI1 every 5,000 km or 1 year (fixed) 1)
	---	QI2 every 7,500 km or 1 year (fixed) 1)
	---	QI3 every 10,000 km or 1 year (fixed) 1)
	QI4 every 15,000 km or 1 year (fixed) 1)	
	QI6 max. 30,000 km or 2 years (flexible) 1)	---
	QI7 every 10,000 mi or 1 year (fixed) 1)	---

1) Whichever occurs first.

Scope of work	Climate and traffic conditions usual for passenger vehicles operated on fuels compliant with EN 228 or EN 590/EN 15940	For operation with fuels that are »NOT« compliant with standards EN 228 ⇒ page 46 or EN 590/ EN 15940 ⇒ page 47
Inspection	---	QI1 every 10,000 km or 1 year 1)
	---	QI2 every 15,000 km or 1 year 1)

2.3.4 Air filter

Scope of work	Climate and traffic conditions usual for passenger vehicles	Countries with high levels of dust ⇒ page 48
Air filter: cleaning housing and renewing filter element • Applies only to Polo with engine code CHYB & CHYC and up! with PFI	Every 60,000 km or 4 years 1)	Every 30,000 km or 2 years 1)
Air filter: cleaning housing and renewing filter element	Every 90,000 km or 6 years 1)	Every 30,000 km or 2 years 1)

1) Whichever occurs first.

2.3.5 Interior filter

Scope of work	Climate and traffic conditions usual for passenger vehicles	Countries with high levels of dust ⇒ page 48
Interior filter: clean housing and renew filter element • Applies only to up!	Every 30,000 km or 2 years 1)	Max. 1 year or 30,000 km 1)
Interior filter: clean housing and renew filter element	Every 60,000 km or 2 years 1)	Max. 1 year or 30,000 km 1)

1) Whichever occurs first.

2.3.6 Panoramic sliding sunroof

Scope of work	Climate and traffic conditions usual for passenger vehicles	Countries with high levels of dust ⇒ page 48
Panoramic sliding sunroof • With colourless special lubricant: in countries with low dust levels, check only function and noise. In countries with high dust levels, the panorama sliding roof must continue to be cleaned and lubricated.	---	Max. 1 year or 15,000 km 1)

1) Whichever occurs first.

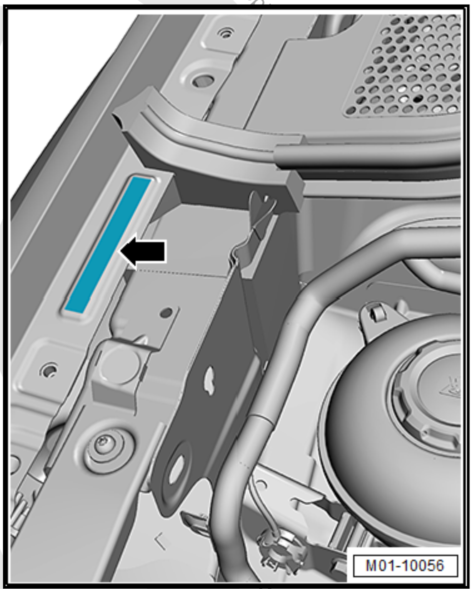
2.3.7 Sliding sunroof drains at front and water drain valves at rear

Scope of work	Climate and traffic conditions usual for passenger vehicles	Countries with high levels of dust ⇒ page 48
Sliding sunroof drains at front: check for blockage, clean if necessary	Max. 2 years or 30,000 km 1)	Max. 1 year or 15,000 km 1)
Water drain valves at rear: check for blockage, clean if necessary		

1) Whichever occurs first.

3.7.2 Vehicle identification number on extension of longitudinal member

The vehicle identification number is located on the extension of longitudinal member -arrow-.



3.7.3 Significance of vehicle identification number

WVG	ZZZ	AU	Z	H	W	000 234
Manufacturer code	Filler characters	Model	Filler characters	Model year 2017	Production location	Serial number

3.8 Countries with hot climate

- Countries with hot and super hot climates have elevated peak temperatures (50°C) compared with the European average (25°C).
- Locally high ambient temperatures have an influence on the longevity of the engine, gearbox and coolant circuit, such as journeys uphill and at higher speeds as well as start/stop operation.

	Lebanon
Abu Dhabi	Libya
Algeria	Mexico
Egypt	Morocco
Afghanistan	Niger
Bahrain	Oman
Burkina Faso	Puerto Rico
China	Palestine
Dubai	Pakistan
Djibouti	Saudi Arabia
Eritrea	South Sudan
Guinea	Sierra Leone
Guinea-Bissau	Somalia
Iran	Syria

4 Descriptions of work

Swivel joints and axle mountings: inspecting ⇒ page 57

All-wheel drive coupling: changing oil ⇒ page 59

Automatic headlight control and static cornering light: checking function ⇒ page 63

Automatic gearbox 09G: changing ATF ⇒ page 64

Battery (12V): checking battery terminal clamps for secure seating ⇒ page 64

Battery (12V): checking with battery tester (always refer to workshop manual) ⇒ page 69

Battery (12V): checking (only applies for Golf GTE and e-Golf) ⇒ page 69

Status of battery (12V): reading - sending diagnosis protocol via online connection ⇒ page 70

Front passenger airbag: checking key switch and “ON/OFF function” ⇒ page 70

Tyres: checking condition, wear pattern, tyre pressure and tread depth ⇒ page 71

Brake and clutch system: changing brake fluid ⇒ page 128

Brake system and shock absorbers: inspecting for leaks and damage ⇒ page 135

Brake fluid level: checking ⇒ page 135

Brakes, front and rear: checking thickness of brake pads and condition of brake discs ⇒ page 137

Diesel fuel filter: draining ⇒ page 140

Diesel fuel filter: renewing ⇒ page 140

Diesel particulate filter: checking ⇒ page 142

Dual clutch gearbox 0D9: changing gear oil and filter ⇒ page 142

Dual clutch gearbox 0DD: changing gear oil ⇒ page 143

Dual clutch gearbox 0DL: changing gear oil ⇒ page 143

Dual clutch gearbox 0GC: changing gear oil ⇒ page 143

Three-phase current drive: calibrating ⇒ page 143

Window regulators: checking positioning (open and close functions) ⇒ page 143

Natural gas system: reset interval display if a check in line with ECE ruling 110 has been carried out ⇒ page 144

Natural gas system (bivalent): visual inspection of natural gas fuel tank for corrosion and leakage ⇒ page 144

Natural gas system (monovalent): visual inspection of natural gas fuel tank for corrosion and leakage ⇒ page 150

Natural gas system: checking wax layer between natural gas fuel tank and fuel tank shut-off valve ⇒ page 156

CNG tank: renewing ⇒ page 156

Natural gas filler connection and sealing cap: checking condition, cleaning if necessary and checking seal ⇒ page 157

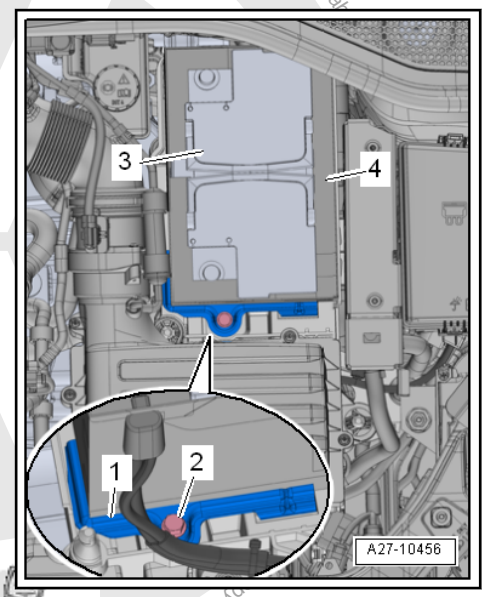
NOTICE

The battery clamp on the positive terminal is not firmly attached.

Potential short circuit or sparks.

- **First, always disconnect the battery earth strap from the battery negative terminal.**

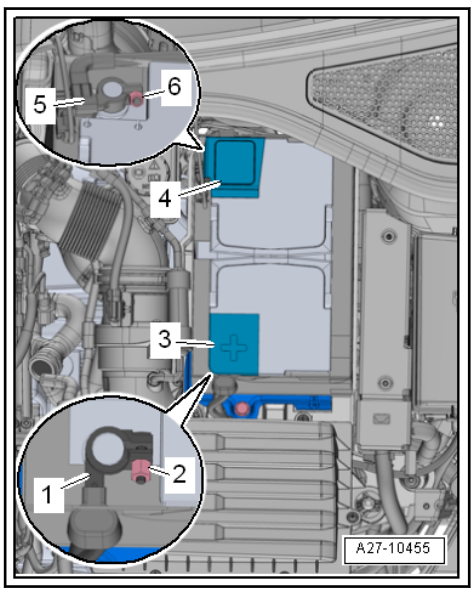
– Open cover of heat shield sleeve -4-.



– Check battery -3- for secure seating. If necessary, retighten bolt -2- to specified torque.

– Open cover -4- over battery negative terminal.

– If fitted, open cover -3- on battery positive terminal.



– Check battery terminal clamps -1- and -5- for secure seating. If necessary, retighten nuts -2- and -6-.

Specified torque	Nm
Nut for battery terminal	6

4.10.5 Tyre pressures, Golf

Note

- *During delivery inspection, check that tyre inflation pressure sticker is fitted. If the sticker is missing, order a new sticker through ETKA.*
- *The mandatory tyre pressures for the respective model can be found on a sticker attached to the inside of the tank flap or to the B-pillar.*
- *If the inflation pressure sticker is missing, proceed as follows:*
- *Locate correct part number for respective vehicle in ETKA.*
- *Using part number, determine respective inflation pressures in tyre inflation table.*
- *Uniform pressure: if tyre sizes are not shown for a part number, then a uniform pressure is valid for all authorised wheel/tyre combinations. ⇒ Wheels and tyres guide; Rep. gr. 44; Wheels, tyres, vehicle geometry; Wheel and tyre combinations*

Check tyre pressure using tyre inflator -VAS 5216-, correct if necessary.

Part number -5G0 010 829 A-	Golf			
Part number -5G0 010 841 G-				
Part number -5G0 010 000 AQ-				
Part number -5G0 010 000 BL-				
	Half payload kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
All [1]	200/2.0/29	200/2.0/29	230/2.3/33	280/2.8/41
Emergency spare tyre	415/4.2/61			

[1] Valid for all authorised wheel/tyre combinations. ⇒ Wheels and tyres guide; Rep. gr. 44; Wheels, tyres, vehicle geometry; Wheel and tyre combinations

Part number -5G0 010 841 A-	Golf			
Part number -5G0 010 841 J-				
	Half payload kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
195/65 R15	200/2.0/29	200/2.0/29	230/2.3/33	280/2.8/41
205/55 R16				
225/45 R17				
205/50 R17	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42
225/40 R18				
T125/70 R16 [1]	415/4.2/61			
T125/70 R18 [1]				

Part number -5G0 010 000 AS-	Golf			
Part number -5G0 010 000 BN-				
	Half payload kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
205/50 R17				
225/45 R17				
225/40 R18				
225/35 R19	230/2.3/33	230/2.3/33	250/2.5/36	290/2.9/42
T125/70 R16 1)	415/4.2/61			
T125/70 R18 1)				

1) Spare wheel

Part number -5G0 010 000 AT-	Golf			
Part number -5G0 010 000 BP-				
	Half payload kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
205/55 R16	200/2.0/29	200/2.9/29	230/2.3/33	280/2.8/41
225/45 R17				
205/50 R17	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42
225/40 R18				
T125/70 R16 1)	415/4.2/61			
T125/70 R18 1)				

1) Spare wheel

Part number -5G0 010 000 BD-	Golf			
Part number -5G0 010 000 BT-				
	Half payload kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
205/50 R17	250/2.5/36	250/2.5/36	270/2.7/39	300/3.0/44
225/45 R17				
225/40 R18				
225/35 R19	280/2.8/41	280/2.8/41	300/3.0/44	330/3.3/48
T125/70 R16 1)	415/4.2/61			
T125/70 R18 1)				

1) Spare wheel

1) Valid for all authorised wheel/tyre combinations. ⇒ Wheels and tyres guide; Rep. gr. 44; Wheels, tyres, vehicle geometry; Wheel and tyre combinations

Part number -5G0 010 000 JK-	Golf					
	Half payload kPa/bar/psi		Half load, comfort kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**	**Front**	**Rear**
225/40 R18	260/2.6/38	260/2.6/38	230/2.3/33	230/2.3/33	260/2.6/38	290/2.9/42
T125/70 R16	415/4.2/61					
T125/70 R18						

Part number -5G0 010 000 JL-	Golf					
	Half payload kPa/bar/psi		Half load, comfort kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**	**Front**	**Rear**
All 1)	270/2.7/39	270/2.7/39	240/2.4/35	240/2.4/35	270/2.7/39	280/2.8/41

1) Valid for all authorised wheel/tyre combinations. ⇒ Wheels and tyres guide; Rep. gr. 44; Wheels, tyres, vehicle geometry; Wheel and tyre combinations

Part number -5G0 010 000 JM-	Golf					
	Half payload kPa/bar/psi		Half load, comfort kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**	**Front**	**Rear**
205/55 R16	270/2.7/39	270/2.7/39	240/2.4/35	240/2.4/35	270/2.7/39	300/3.0/44
225/45 R17						
205/50 R17						
225/40 R18						
T125/70 R18	415/4.2/61					

Part number -5G0 010 000 JN-	Golf			
	Half payload kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
225/40 R18	250/2.5/36	250/2.5/36	280/2.8/41	310/3.1/45
225/35 R19				
T125/70 R16	415/4.2/61			
T125/70 R18				

Part number -5G0 010 873 T-	Golf Estate			
	Half payload kPa/bar		Full payload kPa/bar	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
225/45 R17 91W				
205/50 R17 93V	220/2.2	220/2.2	240/2.4	290/2.9
225/40 R18 92Y				
T125/70 R16 96M 1)	415/4.2			
T125/70 R18 99M 1)				

1) Spare wheel

Part number -5G0 010 874-	Golf Estate			
	Half payload kPa/bar		Full payload kPa/bar	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
205/55 R16 91V	200/2.0	200/2.0	230/2.3	280/2.8
225/45 R17 91W				
205/50 R17 93V	220/2.2	220/2.2	240/2.4	290/2.9
225/40 R18 92Y				
T125/70 R16 96M 1)	415/4.2			
T125/70 R18 99M 1)				

1) Spare wheel

Part number -5G0 010 874 B-	Golf Estate			
	Half payload kPa/bar		Full payload kPa/bar	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
195/65 R15 91H	210/2.1	210/2.1	230/2.3	280/2.8
205/55 R16 91V				
225/45 R17 91W				
205/50 R17 93V	230/2.3	230/2.3	250/2.5	300/3.0
225/40 R18 92Y				
T125/70 R16 96M 1)	415/4.2			
T125/70 R18 99M 1)				

1) Spare wheel

Part number -5G0 010 874 A-	Golf Estate			
	Half payload kPa/bar		Full payload kPa/bar	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
205/55 R16 91V	230/2.3	230/2.3	250/2.5	300/3.0

Part number -5G0 010 000 HP-	Golf Estate					
	Half payload kPa/bar/psi		Half load, comfort kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**	**Front**	**Rear**
All [1]	230/2.3/33	270/2.7/39	200/2.0/29	240/2.4/35	250/2.5/36	300/3.0/44
T125/70 R16 [2]	415/4.2/61					
T125/70 R18 [2]						

[1] Valid for all authorised wheel/tyre combinations. ⇒ Wheels and tyres guide; Rep. gr. 44; Wheels, tyres, vehicle geometry; Wheel and tyre combinations

[2] Spare wheel

Part number -5G0 010 000 HQ-	Golf Estate					
	Half payload kPa/bar/psi		Half load, comfort kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**	**Front**	**Rear**
All [1]	240/2.4/35	240/2.4/35	210/2.1/30	210/2.1/30	240/2.4/35	280/2.8/41

[1] Valid for all authorised wheel/tyre combinations. ⇒ Wheels and tyres guide; Rep. gr. 44; Wheels, tyres, vehicle geometry; Wheel and tyre combinations

Part number -5G0 010 000 KB-	Golf Estate					
	Half payload kPa/bar/psi		Half load, comfort kPa/bar/psi		Full payload kPa/bar/psi	
Tyre size	**Front**	**Rear**	**Front**	**Rear**	**Front**	**Rear**
All [1]	230/2.3/33	230/2.3/33	200/2.0/29	200/2.0/29	230/2.3/33	280/2.8/41
T125/70 R18 [2]	415/4.2/61					

[1] Valid for all authorised wheel/tyre combinations. ⇒ Wheels and tyres guide; Rep. gr. 44; Wheels, tyres, vehicle geometry; Wheel and tyre combinations

[2] Spare wheel

Part number -5G0 010 000 MF-	Golf Estate			
	Half payload kPa/bar		Full payload kPa/bar	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
225/45 R17 91W				
225/40 R18 92Y	230/2.3	230/2.3	250/2.5	300/3.0
T125/70 R16 96M 1)	415/4.2			
T125/70 R18 99M 1)				

1) Spare wheel

Part number -5G0 010 000 MG-	Golf Estate			
	Half payload kPa/bar		Full payload kPa/bar	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
205/55 R16 91V	230/2.3	230/2.3	250/2.5	300/3.0
225/45 R17 91W				
225/40 R18 92Y	250/2.5	250/2.5	270/2.7	320/3.2
T125/70 R16 96M 1)	415/4.2			
T125/70 R18 99M 1)				

1) Spare wheel

Part number -5G0 010 000 KP-	Golf Estate			
	Half payload kPa/bar		Full payload kPa/bar	
Tyre size	**Front**	**Rear**	**Front**	**Rear**
225/45 R17 91W	280/2.8	280/2.8	320/3.2	350/3.5
225/40 R18 92Y				
T125/70 R18 99M 1)	415/4.2			

1) Spare wheel

4.12 Brake system and shock absorbers: inspecting for leaks and damage

Check following components for leaks and damage:

- Brake master cylinder
- Brake servo (for anti-lock brake system: hydraulic unit)
- Brake pressure regulator and
- Brake caliper
- Shock absorbers (during inspection only)
- Presence of dust caps on brake fluid bleeder screws
- Presence of caps on guide bushes

– Ensure that brake hoses are not twisted.

– Additionally ensure that brake hoses do not touch any vehicle components when steering is at full lock.

– Check brake hoses for abrasion, porosity and brittleness.

– Check brake lines for corrosion.

– Check brake connections and fastenings for correct seating, leaks and corrosion.

– Check brake lines and brake hoses for correct seating and attachment in retainers.

Note

Faults found must always be rectified (repair measure).

4.13 Brake fluid level: checking

CAUTION

Risk of skin injury from corrosive brake fluid.

Risk of irritation and injury to skin.

– Avoid contact with the skin.

NOTICE

Risk of damage to vehicle from corrosive brake fluid.

Possible damage to paintwork and vehicle.

– Avoid contact with components and paintwork and if necessary rinse off any spilt brake fluid with water.

NOTICE

Risk of damage to brake system if brake fluid is used incorrectly.

Mineral oils damage plugs and sleeves of the brake system.

– Do not mix fluids containing mineral oil (oil, petrol, cleaning solution) with brake fluid.

- Gas leak detector -VAS 523 003-

- Mirror
- Battery lamp -VAS 6901-

- Leak detecting spray
- Borescope

DANGER

Risk of explosion from incorrect handling of natural gas system.

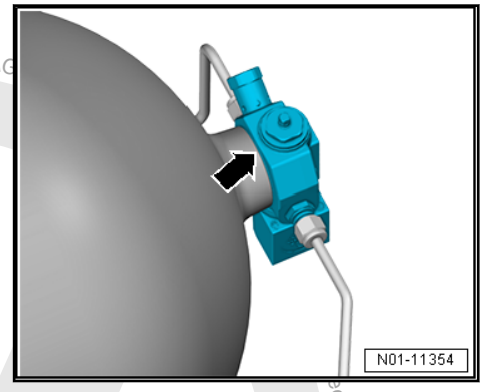
– Only specially trained technicians may carry out work on natural gas systems.

Condition for testing:

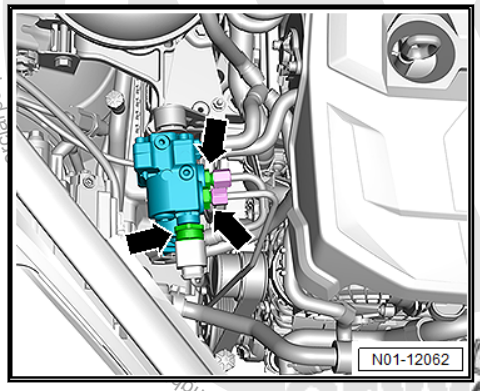
- All parts of the natural gas system to be checked must be reached easily.
- The exhaust emissions warning lamp in the dash panel insert must not light up, and there must be no entries concerning natural gas in the event memory of the engine control unit.
- Working environment free of draught

Note

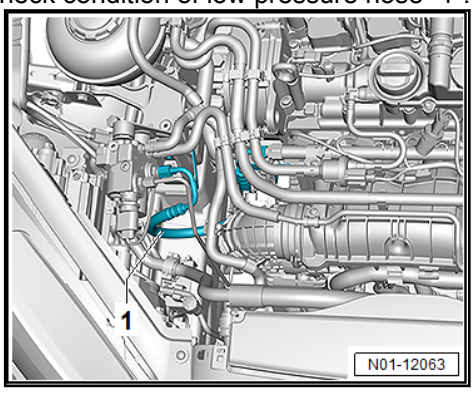
- *Every draught of air above 1.8 km/h (slight gust of wind) will result in falsification of the measuring result. Therefore, it is essential to work in a draught-free environment.*
- *When working on the natural gas system always ensure for tidiness and cleanliness!*



- Check electromechanical high-pressure regulator for gas mode with all connections and threaded connections -arrows-.



- Check condition of low pressure hose -1-.



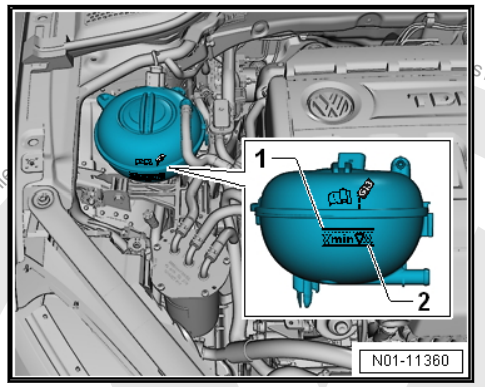
- Gas rail with gas injectors -1-, gas rail sensor -2- and connection for low-pressure line -3-.

– Check coolant additive concentration after road test again.

4.40.2 Coolant level: checking, replenishing coolant if necessary

– Check coolant level in coolant expansion tank with engine cold.

- ♦ Delivery inspection: coolant level is at least at marking -1-.
- ♦ At delivery inspection a coolant level above marking -1- is permissible.
- ♦ The excessive amount of coolant does not need to be extracted as the coolant level in new vehicles will decrease after the system has been bled.



- ♦ Inspection: coolant level is above “MIN. marking” -2-.

4.40.3 Mixing ratio

Anti-freeze protection to	Coolant additive portion	Distilled water
-25°C	approx. 40%	approx. 60%
-36°C	approx. 50%	approx. 50%

Note

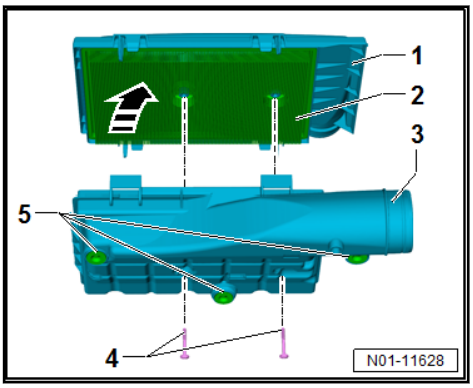
The retaining tabs may break.

– Remove upper part of air filter housing and remove air filter element.

Installing

– Check air filter housing, air mass meter and water drains for soiling and clean them if necessary ⇒ page 179 .

– Insert air filter element -2- centrally into mounting in air filter upper part -1-.



– Fit lower part of air filter -3- onto upper part of air filter -1-.

– Carefully engage retaining tabs one after the other.

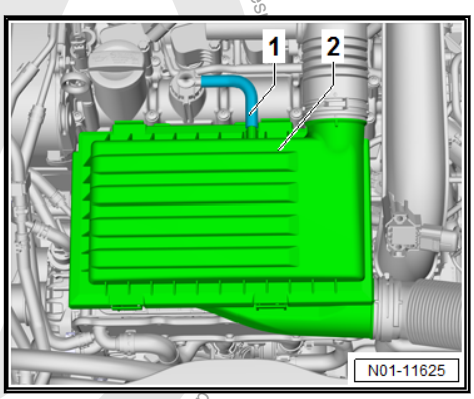
– Screw in bolts -4-, and tighten them to specified torque.

– Check ball stud grommets -5- for damage, and renew them as necessary.

– Position air filter housing centrally on ball studs, and press it on firmly.

– Fit both air ducts to air filter housing.

– Fit hose clips.

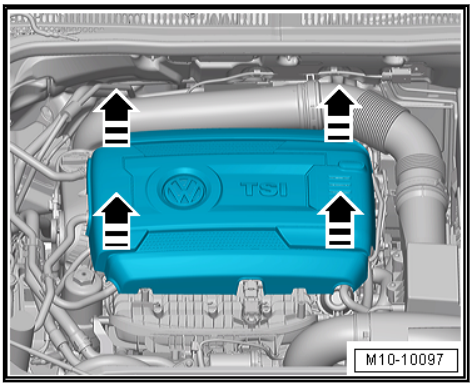


– Fit air intake hose -1- onto upper part of air filter -2-.

Specified torque	Nm
Securing bolts -4-	1.5

4.46.2 Engine cover panel, 1.8 l TSI engines and 2.0 l TSI engines: removing and installing

Removing



– Carefully pull engine cover panel off retaining pins one after the other -arrows-. Do not pull off engine cover panel abruptly or only on one side.

Installing

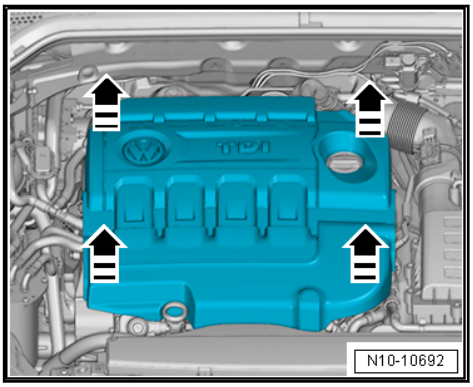
– To prevent damage, do not strike engine cover panel with the fist or a tool.

– Position engine cover panel, paying attention to oil filler neck and dipstick.

– Press engine cover panel into rubber grommets first on left side and then on right side.

4.46.3 Engine cover panel, common rail diesel engines: removing and installing

Removing



– Carefully pull engine cover panel off retaining pins one after the other -arrows-. Do not pull off engine cover panel abruptly or only on one side.

Installing

– To prevent damage, do not strike engine cover panel with the fist or a tool.

– Position engine cover panel, paying attention to oil filler neck and dipstick.

– Press engine cover panel into rubber grommets first on left side and then on right side.

4.49.4 Engine oil: replenishing

NOTICE

The oil pressure warning lamp in the dash panel insert lights up after an oil change.

Risk of damage to the engine if the accelerator pedal is depressed too early.

- **Run the engine at idling speed, and do not rev up!**
- **Make sure not to rev up as long as the warning lamp is lit.**

Special tools and workshop equipment required

- Oil filler funnel -VAS 6842A-
- Adapter -VAS 6842/2-
- Adapter -VAS 6842/3A-

– Use oil filler funnel -VAS 6842A- with suitable adapter if necessary to fill oil.

– Clean sealing surface in engine oil filler neck using a lint-free cloth prior to screwing in the cap.

Engine oil: capacities and specifications up to model year ►2020 ⇒ page 195

Engine oil: capacities and specifications as of model year 2021► ⇒ page 202

Oil level: checking ⇒ page 186

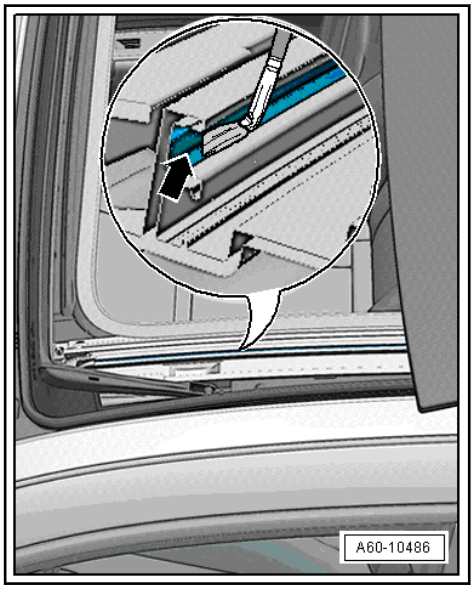
4.50 Engine oil: capacities and specifications up to model year ►2020

4.50.1 Golf

A new VW standard for engine oil - 508 00/509 00 - has been introduced for most Volkswagen engines. This is distinguished by reduced fuel consumption and CO_2 emissions.

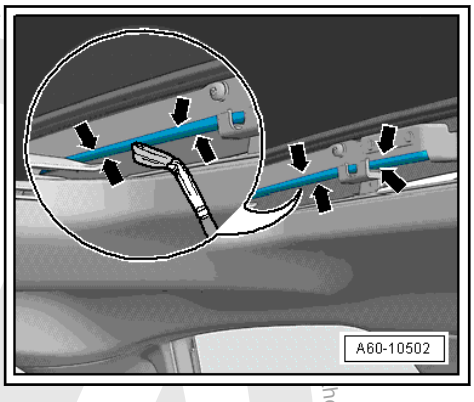
The main facts are the following:

- VW 508 00/509 00 is a combined product that meets the petrol specification as VW 508 00 and the diesel specification as VW 509 00.
- Volkswagen recommends not using the new specifications for older engine generations. The recommended specifications are allocated to the engines in this chapter.
- Engines with particulate filter (petrol and diesel) can also be filled with oil standard VW 504 00/507 00 when serviced. However, the caveat could be elevated fuel consumption and CO_2 emissions.
- Engines without particulate filter can also be filled with oil standard VW 502 00/505 01 when serviced. However, the caveat could be elevated fuel consumption and CO_2 emissions.
- The new oil is miscible.



– Apply lubricant to the inner guide rail -arrow-.
– Remove any excess lubricating paste from guide rails using a lint-free cloth.
– Repeat process on the other side of the vehicle.

4.52.3 Guide rail: cleaning and lubricating from inside



– Close glass panel just enough so that wind deflector is still completely deployed.
– Remove residual grease and dirt from guide rail using a lint-free cloth.
– Apply lubricant to guide rail from inside -arrows-.
– Remove any excess lubricating paste from guide rail using a lint-free cloth.
– Repeat process on the other side of the vehicle.

4.52.4 Glass panel guide: cleaning and lubricating from inside

Close glass panel just enough so that wind deflector is still completely deployed.

4.56.1 General information

Properties

- The reducing agent (AdBlue®/DEF) is not a diesel additive and must not be poured into the diesel fuel tank.
- The reducing agent (AdBlue®/DEF) is used for exhaust treatment to reduce nitrogen oxides in the exhaust gas of diesel powered vehicles.
- The reducing agent (AdBlue®/DEF) reduces these nitrogen oxides to water and nitrogen.
- The reducing agent (AdBlue®/DEF) is a high-purity 32.5% urea solution and is used in systems with exhaust treatment (SCR catalytic converters) ⇒ page 282 for diesel engines.
- The reducing agent (AdBlue®/DEF) is legally required for operating vehicles with SCR.
- AdBlue® is a registered trademark of the Verband der Automobilindustrie e. V. (VDA) in the USA, Germany, the European Union and other countries.

Application

- Do not mix additives with reducing agent (AdBlue®/DEF).
- Do not dilute the reducing agent (AdBlue®/DEF) with water.
- Do not use fluid which has already been used.
- Use only reducing agent (AdBlue®/DEF) in the intended, original containers. Also note the expiry date information.
- Additionally note the reducing agent manufacturer's usage and storage instructions.

Technical data

- “NO_X reducing agent AUS 32” is the designation according to ISO 22241-1.
- The reducing agent (AdBlue®/DEF) is filled in a separate tank in the vehicle. It is NOT therefore mixed with diesel fuel.
- A refill container approved by Volkswagen must be used for replenishing the reducing agent (AdBlue®/DEF).
- The part numbers for available sizes of containers is available in ⇒ ETKA.

Insufficient reducing agent

If the level of reducing agent is low, one of the following messages appears on the dash panel insert:

- From a remaining distance of 2400 km, a gong sounds and “Top up AdBlue (DEF)!” is displayed“ Remaining distance 2400 km”.
- From a remaining distance of 1000 km, a warning buzzer sounds and “Top up AdBlue (DEF)!” is displayed“ No engine starting in 1000 km”
- From a remaining distance of 0 km, a warning buzzer sounds three times and “Top up AdBlue (DEF)!” is displayed“ Engine start no longer possible is shown.”

4.61 Headlight adjustment: checking halogen headlights

Note

- *Additional weights are no longer used.*
- *Instead, a different inclination setting on the headlight adjustment unit is used.*
- *If maintenance tables are used, the settings are also displayed in the vehicle-specific maintenance table.*
- *In the US, Canadian and Mexican markets, SAE-compliant headlights are used.*
- *The headlight adjustment is subject to a separate charge.*

Test and adjustment conditions ⇒ page 225

Headlight adjustment (ECE): checking ⇒ page 225

Check headlight adjustment (SAE). ⇒ page 226

Adjusting halogen headlights ⇒ page 228

4.61.1 Test and adjustment conditions

- Tyre pressure OK
- Lenses must not be damaged or dirty.
- Reflectors and bulbs OK.
- The vehicle must be rolled forward and backward several metres or front and rear springs must be bounced fully several times so that springs settle.
- Vehicle and headlight adjuster must be on a level surface.
- Vehicle and headlight adjuster must be aligned.
- Inclination must be set.
- Refer to the ⇒ operating instructions for headlight adjustment units.
- The current software for the headlight adjustment unit -VAS 621 001- is available on the equipment manufacturer's homepage.

4.61.2 Headlight adjustment (ECE): adjusting

Special tools and workshop equipment required

- Headlight adjustment unit -VAS 621 001-
- Headlight adjustment unit -VAS 621 005-

Note

For certain export markets, halogen headlights with manually regulated headlight range control are not offered.

– Check headlight height adjustment by setting the maximum level and monitoring the headlights' light.

– Depending on the equipment, the headlight range can be adjusted with the thumb wheel, in position 0 or using the Infotainment system in the menu Vehicle → Setup.

Subsequent check of left headlight

Note

- *The subsequent check of the headlight is performed using the test pattern for the dipped beam headlight.*
- *It is not permitted to change the lateral setting of the headlight any more during the check. Readjusting the vertical setting is permissible.*

– Check headlight setting.

– Adjust height setting of headlight, if necessary.

Note

- *Adjustment of the right headlight is carried out in the same sequence.*
- *The adjustment screws for the right headlight are a mirror image.*

4.63 Headlight adjustment: checking LED headlights

Note

- *Additional weights are no longer used.*
- *Instead, a different inclination setting on the headlight adjustment unit is used.*
- *If maintenance tables are used, the settings are also displayed in the vehicle-specific maintenance table.*
- *In the US, Canadian and Mexican markets, SAE-compliant headlights are used.*
- *The headlight adjustment is subject to a separate charge.*

Test and adjustment conditions ⇒ page 235

Headlight adjustment (ECE): checking ⇒ page 236

Check headlight adjustment (SAE). ⇒ page 237

LED headlights: adjusting ⇒ page 238 .

4.63.1 Test and adjustment conditions

- Tyre pressure OK
- Headlight lenses must not be damaged or dirty.
- Reflectors and lights OK
- The initialisation of the headlight range control must have been completed. [1)]
- The vehicle must be rolled forward and backward several metres or front and rear springs must be bounced fully several times so that springs settle.
- Vehicle and headlight adjuster must be on a level surface.
- Vehicle and headlight adjustment unit must be aligned.

Recoding from flexible to fixed intervals

ODIS Service
– Connect vehicle diagnostic tester ⇒ page 43 .
– Switch on ignition.
– Carry out identification of vehicle.
– Enter task data, or select “Without task”.
– Select “Control units”.
– Select “Dash panel insert”.
– Select “Guided Functions”.
– Select “Change flexible/fixed intervals”.
– Carry out adaptation according to the information of “Guided functions”.

Changing values for maximum distance to be driven (km) until next oil change service (fixed) during delivery inspection

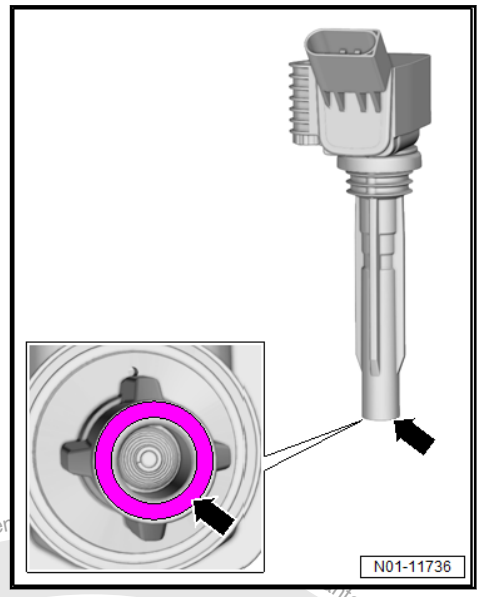
ODIS Service
– Connect vehicle diagnostic tester ⇒ page 43 .
– Switch on ignition.
– Carry out identification of vehicle.
– Enter task data, or select “Without task”.
– Select “Control units”.
– Select “Dash panel insert”.
– Select “Guided Functions”.
– Select “Oil change service (fixed)”.
– Follow instructions in “Guided functions” mode.
– Reset “-1- Oil change service (fixed)”.
– Follow instructions in “Guided functions” mode.
The current values for maximum distance to be driven (km) until next oil change service are shown in the display of the vehicle diagnostic tester.
– Select “No”.
– Select value for maximum distance to be driven until next oil change service, according to specifications valid in your country.
– Carry out adaptation according to the information of “Guided functions”.

Installing

Note

- *When installing new spark plugs, regrease ignition coils with output stage using silicone paste ⇒ ETKA.*
- *The applicable silicone paste is stated in the ETKA along with the corresponding ignition coil and/or spark plug.*

– Screw in new spark plugs and tighten them to specified torque using spark plug socket -3122 B- ⇒ page 256 .

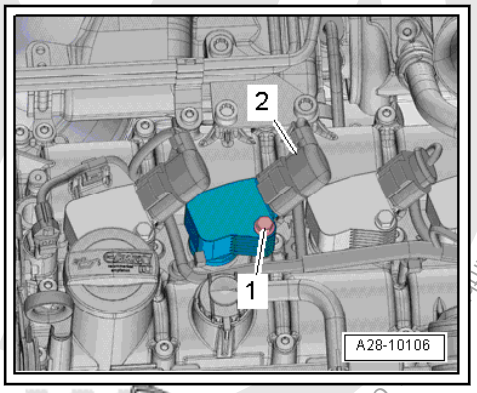


– Apply a thin bead of silicone paste on the circumference of the sealing hose of the ignition coil with output stage -arrow-.

– Align and insert all ignition coils with output stage one after another loosely into spark plug hole.

– Press ignition coils with output stage onto spark plugs evenly by hand (do not use any tools).

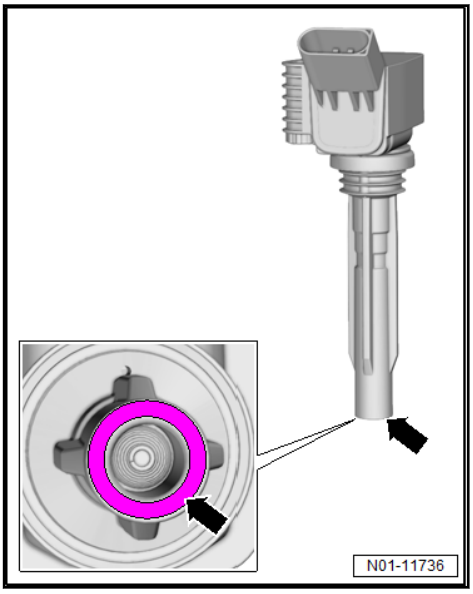
– Tighten bolt -1- of ignition coil with output stage to specified torque ⇒ page 256 .



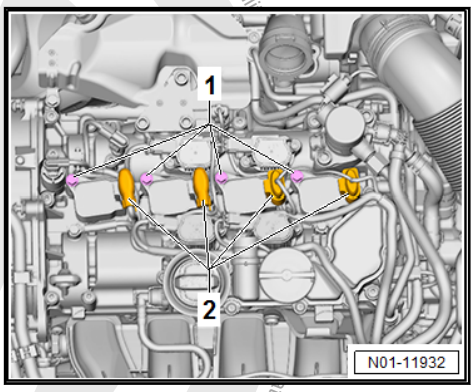
– Attach electrical connector -2-.

Repeat step for all ignition coils with output stage.

– Further assembly is performed in the reverse order of removal.



– Apply a thin bead of silicone paste on the circumference of the sealing hose of the ignition coil with output stage -arrow-.
– Align and insert all ignition coils with output stage one after another loosely into spark plug hole.
– Press ignition coils with output stage onto spark plugs evenly by hand (do not use any tools).
– Tighten bolt -1- of ignition coil with output stage to specified torque ⇒ page 265 .



– Connect connector -2-.

Repeat step for all ignition coils with output stage.

– Further assembly is performed in the reverse order of removal.

Specified torque	Nm
Spark plugs in cylinder head	22
Bolt for ignition coil with output stage	8

- Registration number
- Key numbers
- Vehicle identification number
- Type of fuel
- Mileage

The following vehicle data can be found in the vehicle registration certificate part 1:

- Registration number: “e.g. WOB-HH 1234”
- Emission key No. “field 14.1 (code for field 14)”
- Vehicle manufacturer: “Field 2”, “Field 2.1 (code for field 2)”
- Vehicle identification number “field E”
- Type and version “Field D2 (type only)”, “Field 2.2 (code for field D.2)”
- Nominal speed “field P4”

Specified data input for EET

There are different ways to enter the specified data:

- 1. By manual input
- 2. By automatic data acceptance from the exhaust-emission station database

Note

- *Regarding Euro 6 vehicles with manual gearbox and infotainment system, the deactivation of the idle speed limitation is carried out in the infotainment system.* *⇒ page 275*
- *Euro 6 vehicles with automatic gearbox, manufactured from week no. 48/18 do not have idle speed limitation any more.*
- *If there is no ESP or soft key in the infotainment system to deactivate the speed limitation, the governed speed can be measured using the engine speed limited by the control unit. To do this, all the EET specifications must be entered manually.*
- *For all Euro 6 vehicles an opacity figure of max. 0.25 m^{-1} applies.*

Deactivation of idle speed limitation of Euro 6 vehicles with manual gearbox:

– Switch on ignition.
– Switch on Infotainment system.
– Press Home function button.
– Press Vehicle function button.
– Press Setup function button.
– Press ESC system function button and deactivate TCS.

Manual specified data input for EET: