



Das Auto.

2014

Jetta Hybrid

**Quick Reference
Specification Book**

2014 Volkswagen Jetta Hybrid Quick Reference Specification Book

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GENERAL INFORMATION

Decimal and Metric Equivalents

Distance/Length

To calculate: mm x 0.03937 = in.

mm	in.	mm	in.	mm	in.	mm	in.
0.002	0.00008	0.01	0.0004	0.1	0.004	1	0.04
0.004	0.00016	0.02	0.0008	0.2	0.008	2	0.08
0.006	0.00024	0.03	0.0012	0.3	0.012	3	0.12
0.008	0.00031	0.04	0.0016	0.4	0.016	4	0.16
0.010	0.00039	0.05	0.0020	0.5	0.020	5	0.20
0.020	0.00079	0.06	0.0024	0.6	0.024	6	0.24
0.030	0.00118	0.07	0.0028	0.7	0.028	7	0.28
0.040	0.00157	0.08	0.0031	0.8	0.031	8	0.31
0.050	0.00197	0.09	0.0035	0.9	0.035	9	0.35
0.060	0.00236	0.10	0.0039	1.0	0.039	10	0.39
0.070	0.00276	0.20	0.0079	2.0	0.079	20	0.79
0.080	0.00315	0.30	0.0118	3.0	0.118	30	1.18
0.090	0.00354	0.40	0.0157	4.0	0.157	40	1.57
0.100	0.00394	0.50	0.0197	5.0	0.197	50	1.97
0.200	0.00787	0.60	0.0236	6.0	0.236	60	2.36
0.300	0.01181	0.70	0.0276	7.0	0.276	70	2.76
0.400	0.01575	0.80	0.0315	8.0	0.315	80	3.15
0.500	0.01969	0.90	0.0354	9.0	0.354	90	3.54
0.600	0.02362	1.00	0.0394	10.0	0.394	100	3.94
0.700	0.02756	2.00	0.0787	20.0	0.787		
0.800	0.03150	3.00	0.1181	30.0	1.181		
0.900	0.03543	4.00	0.1575	40.0	1.575		
1.000	0.03937	5.00	0.1969	50.0	1.969		
2.000	0.07874	6.00	0.2362	60.0	2.362		
3.000	0.11811	7.00	0.2756	70.0	2.756		
4.000	0.15748	8.00	0.3150	80.0	3.150		
5.000	0.19685	9.00	0.3543	90.0	3.543		
6.000	0.23622	10.00	0.3937	100.0	3.937		
7.000	0.27559	20.00	0.7874				
8.000	0.31496	30.00	1.1811				
9.000	0.35433	40.00	1.5748				
10.000	0.39370	50.00	1.9685				
20.000	0.78740	60.00	2.3622				
30.000	1.18110	70.00	2.7559				
40.000	1.57480	80.00	3.1496				
50.000	1.96850	90.00	3.5433				
60.000	2.36220	100.00	3.9370				
70.000	2.75591						
80.000	3.14961						
90.000	3.54331						
100.000	3.93701						

Tightening Torque

Nm-to-lb·ft (ft·lb)

To calculate: Nm x 0.738 = lb·ft

Nm	lb·ft (ft·lb)	Nm	lb·ft (ft·lb)	Nm	lb·ft (ft·lb)
10	7	55	41	100	74
11	8	56	41	105	77
12	9	57	42	110	81
13	10	58	43	115	85
14	10	59	44	120	89
15	11	60	44	125	92
16	12	61	45	130	96
17	13	62	46	135	100
18	13	63	46	140	103
19	14	64	47	145	107
20	15	65	48	150	111
21	15	66	49	155	114
22	16	67	49	160	118
23	17	68	50	165	122
24	18	69	51	170	125
25	18	70	52	175	129
26	19	71	52	180	133
27	20	72	53	185	136
28	21	73	54	190	140
29	21	74	55	195	144
30	22	75	55	200	148
31	23	76	56	205	151
32	24	77	57	210	155
33	24	78	58	215	159
34	25	79	58	220	162
35	26	80	59	225	166
36	27	81	60	230	170
37	27	82	60	235	173
38	28	83	61	240	177
39	29	84	62	245	181
40	30	85	63	250	184
41	30	86	63	260	192
42	31	87	64	270	199
43	32	88	65	280	207
44	32	89	66	290	214
45	33	90	66	300	221
46	34	91	67	310	229
47	35	92	68	320	236
48	35	93	69	330	243
49	36	94	69	340	251
50	37	95	70	350	258
51	38	96	71	360	266
52	38	97	72	370	273
53	39	98	72	380	280
54	40	99	73	390	288
55	41	100	74	400	295

Nm-to-lb-in (in·lb), kg·cm

To calculate: Nm x 8.85 = lb-in • Nm x 10.20 = kg·cm

Nm	lb-in (in·lb)	kg·cm	Nm	lb-in (in·lb)	kg·cm
1	9	10	26	230	265
2	18	20	27	239	275
3	27	31	28	248	286
4	35	41	29	257	296
5	44	51	30	266	306
6	53	61	31	274	316
7	62	71	32	283	326
8	71	82	33	292	337
9	80	92	34	301	347
10	89	102	35	310	357
11	97	112	36	319	367
12	106	122	37	327	377
13	115	133	38	336	387
14	124	143	39	345	398
15	133	153	40	354	408
16	142	163	41	363	418
17	150	173	42	372	428
18	159	184	43	381	438
19	168	194	44	389	449
20	177	204	45	398	459
21	186	214	46	407	469
22	195	224	47	416	479
23	204	235	48	425	489
24	212	245	49	434	500
25	221	255	50	443	510

N·cm-to-lb-in (in·lb), kg·cm

To calculate: N·cm x 0.089 = lb-in • N·cm x 0.102 = kg·cm

N·cm	lb-in (in·lb)	kg·cm	N·cm	lb-in (in·lb)	kg·cm
50	4	5	250	22	25
60	5	6	300	27	31
70	6	7	350	31	36
80	7	8	400	35	41
90	8	9	450	40	46
100	9	10	500	44	51
110	10	11	550	49	56
120	11	12	600	53	61
130	12	13	650	58	66
140	12	14	700	62	71
150	13	15	750	66	76
160	14	16	800	71	82
170	15	17	850	75	87
180	16	18	900	80	92
190	17	19	950	84	97
200	18	20	1000	89	102

kg·cm-to-lb·in (in·lb), N·cm

To calculate: $\text{kg}\cdot\text{cm} \times 0.868 = \text{lb}\cdot\text{in}$ • $\text{kg}\cdot\text{cm} \times 9.81 = \text{N}\cdot\text{cm}$

kg·cm	lb·in (in·lb)	N·cm	kg·cm	lb·in (in·lb)	N·cm
5	4	49	110	95	1079
6	5	59	120	104	1177
7	6	69	130	113	1275
8	7	78	140	122	1373
9	8	88	150	130	1471
10	9	98	160	139	1569
20	17	196	170	148	1667
30	26	294	180	156	1765
40	35	392	190	165	1863
50	43	490	200	174	1961
60	52	588	210	182	2059
70	61	686	220	191	2157
80	69	785	230	200	2256
90	78	883	240	208	2354
100	87	981	250	217	2452

Warnings and Cautions

WARNINGS

- Some repairs may be beyond your capability. If you lack the skills, tools and equipment, or a suitable workplace for any procedure described in this manual, we suggest you leave such repairs to an authorized dealer service department or other qualified shop.
- Do not reuse any fasteners that have become worn or deformed during normal use. Many fasteners are designed to be used only once and become unreliable and may fail when used a second time. This includes, but is not limited to, nuts, bolts, washers, self-locking nuts or bolts, circlips and cotter pins. Always replace these fasteners with new parts.
- Never work under a lifted car unless it is solidly supported on stands designed for the purpose. Do not support a car on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a car that is supported solely by a jack. Never work under the car while the engine is running.
- If you are going to work under a car on the ground, make sure the ground is level. Block the wheels to keep the car from rolling. Disconnect the battery negative (-) terminal (ground strap) to prevent others from starting the car while you are under it.

- Never run the engine unless the work area is well ventilated. Carbon monoxide kills.
- Remove rings, bracelets and other jewelry so they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Tie back long hair. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.
- Do not attempt to work on your car if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset, or have taken medication or any other substance that may keep you from being fully alert.
- Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the car. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel, vapors or oil.
- Use a suitable container to catch draining fuel, oil, or brake fluid. Do not use food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store oily rags which can ignite and burn spontaneously.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with battery acid. Wear gloves or other protective clothing whenever the job requires working with harmful substances.
- Greases, lubricants and other automotive chemicals contain toxic substances, many of which are absorbed directly through the skin. Read the manufacturer's instructions and warnings carefully. Use hand and eye protection. Avoid direct skin contact
- Disconnect the battery negative (-) terminal (ground strap) whenever you work on the fuel or electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.
- Friction materials (such as brake pads or shoes or clutch discs) contain asbestos fibers or other friction materials. Do not create dust by grinding, sanding, or cleaning with compressed air. Avoid breathing dust. Breathing any friction material dust can lead to serious diseases and may result in death.

(WARNINGS cont'd on next page)

WARNINGS *(cont'd)*

- Batteries give off explosive hydrogen gas during charging. Keep sparks, lighted matches and open flame away from the top of the battery. If hydrogen gas escaping from the cap vents is ignited, it ignites the gas trapped in the cells and causes the battery to explode.
- Connect and disconnect battery cables, jumper cables or a battery charger only with the ignition off. Do not disconnect the battery while the engine is running.
- Do not quick-charge the battery (for boost starting) for longer than one minute. Wait at least one minute before boosting the battery a second time.
- Do not allow battery charging voltage to exceed 16.5 volts. If the battery begins producing gas or boiling violently, reduce the charging rate. Boosting a sulfated battery at a high charging rate can cause an explosion.
- The A/C system is filled with chemical refrigerant, which is hazardous. The A/C system should be serviced only by trained technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat increases system pressure and may cause the system to burst.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.
- Some cars are equipped with a Supplemental Restraint System (SRS) that automatically deploys airbags and pyrotechnic seat belt tensioners in the event of a frontal or side impact. These are explosive devices. Handled improperly or without adequate safeguards, they can be accidentally activated and cause serious injury.
- The ignition system produces high voltages that can be fatal. Avoid contact with exposed terminals and use extreme care when working on a car with the engine running or the ignition on.

- Place jack stands only at locations specified by manufacturer. The vehicle lifting jack supplied with the vehicle is intended for tire changes only. Use a heavy duty floor jack to lift the vehicle before installing jack stands.
- Battery acid (electrolyte) can cause severe burns. Flush contact area with water, seek medical attention.
- Aerosol cleaners and solvents may contain hazardous or deadly vapors and are highly flammable. Use only in a well ventilated area. Do not use on hot surfaces (such as engines or brakes).
- Do not remove coolant reservoir or radiator cap with the engine hot. Burns and engine damage may occur.

CAUTIONS

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized dealer or other qualified shop.
- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly and do not attempt shortcuts. Use tools appropriate to the work and use only replacement parts meeting original specifications. Makeshift tools, parts and procedures will not make good repairs.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque specification listed.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond or lake. Dispose of in accordance with Federal, State and Local laws.
- The control module for the Anti-lock Brake System (ABS) cannot withstand temperatures from a paint-drying booth or a heat lamp in excess of 95°C (203°F) and should not be subjected to temperatures exceeding 85°C (185°F) for more than two hours.
- Before doing any electrical welding on cars equipped with ABS, disconnect the battery negative (-) terminal (ground strap) and the ABS control module connector.
- Always make sure the ignition is off before disconnecting battery.

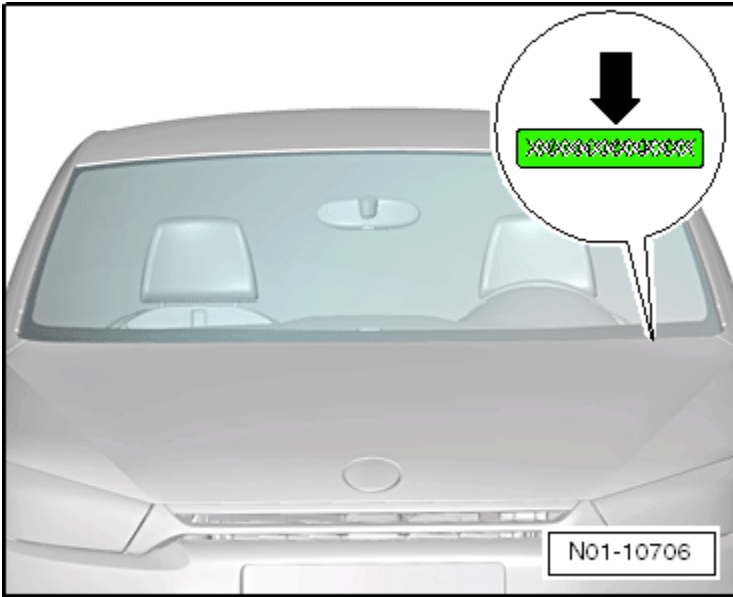
(CAUTIONS cont'd on next page)

CAUTIONS *(cont'd)*

- Label battery cables before disconnecting. On some models, battery cables are not color coded.
- Disconnecting the battery may erase fault code(s) stored in control module memory. Check for fault codes prior to disconnecting the battery cables.
- If a normal or rapid charger is used to charge the battery, disconnect the battery and remove it from the vehicle to avoid damaging paint and upholstery.
- Do not quick-charge the battery (for boost starting) for longer than one minute. Wait at least one minute before boosting the battery a second time.
- Connect and disconnect a battery charger only with the battery charger switched off.
- Sealed or “maintenance free” batteries should be slow-charged only, at an amperage rate that is approximately 10% of the battery’s ampere-hour (Ah) rating.
- Do not allow battery charging voltage to exceed 16.5 volts. If the battery begins producing gas or boiling violently, reduce the charging rate. Boosting a sulfated battery at a high charging rate can cause an explosion.

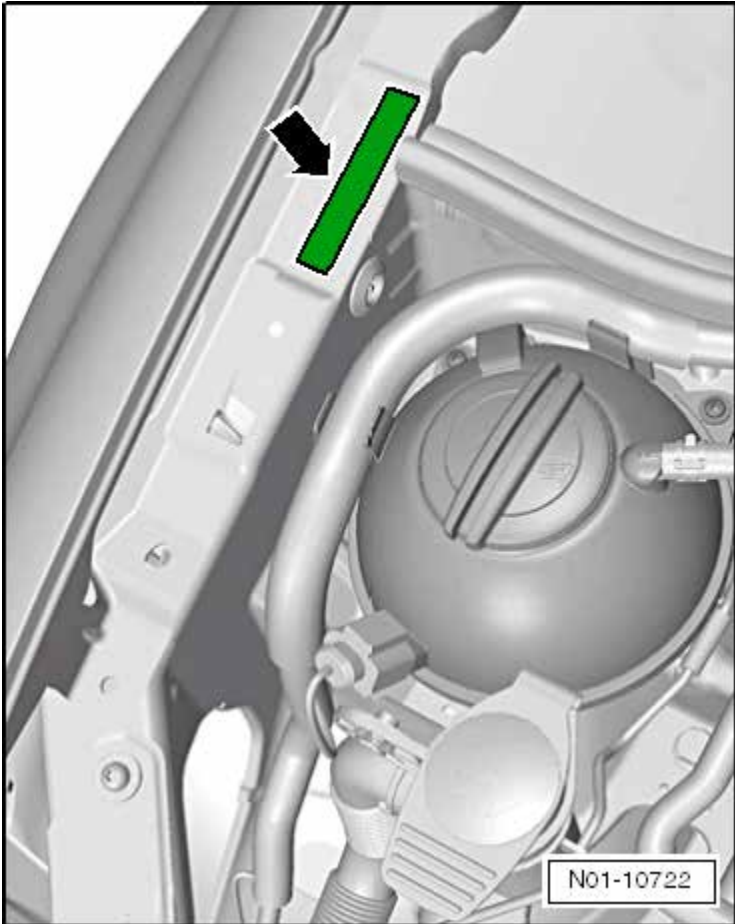
VEHICLE IDENTIFICATION

VIN on Lower Edge of Windshield



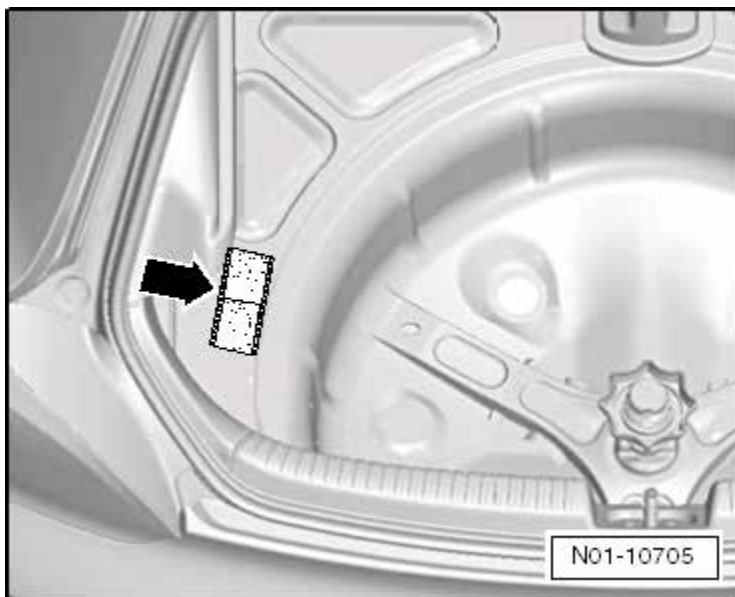
The VIN ➡ is on the left side of the vehicle in the area of the windshield wiper mount. It is visible from outside.

VIN on Longitudinal Member Extension



The Vehicle Identification Number (VIN) is located on the extension of the longitudinal member ➡.

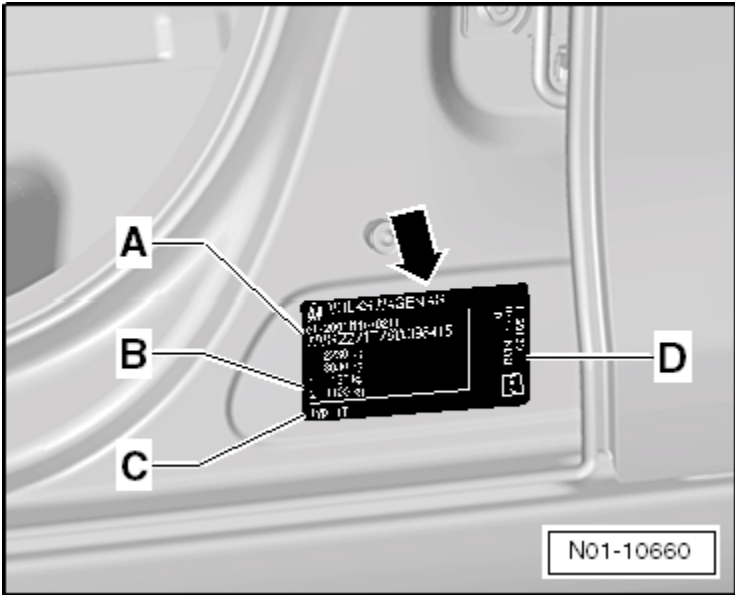
Vehicle Data Label



The vehicle data label ➔ is located in the left rear of vehicle in the spare wheel well. The vehicle data sticker can also be found in the customer's service schedule.

Vehicle
Identification

Type Plate



The type plate ➔ is visible at the bottom of the B-pillar when the left front door is open.

The type plate contains the following vehicle information:

- A – Vehicle Identification Number (VIN)
- B – Variable specifications (axle loads, total permissible weights, permissible towing weights)
- C – Type number
- D – Engine code

VIN Decoder

2014 Volkswagen VIN Decoder (except Routan)

E = 2014

Sequential production number (position 12 - 17)

Country of origin	Manufacturer	Vehicle Type	Series	Engine	Restraint system	Model (7 & 8)	Check digit	Model year	Assembly plant	12	13	14	15	16	17	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
W	V	G	C	V	3	A	X	8	E	W	5	3	2	0	1	4

See back for
WW = Europe - Pass. Car
VW = USA - Pass. Car
3W = Mexico - Pass. Car
WVG = Europe - S.U.V.

AA3** = Passat
AA1 (F) = Eos
AA1 (R) = Golf, GTI, Jetta, Jetta SportWagen
AA (C) = CC
AA = Beetle, Beetle Conv., Tiguan
AA (N) = Touareg
AA (P) = Touareg

C = Chattanooga **P** = Mosel
D = Bratislava **V** = Portugal
E = Emden **W** = Wolfsburg
M = Mexico

*** PZEV** = Partial Zero Emissions Vehicle
**** SULEV II** = Super Low Emissions Vehicle
******* 7 position US model characters are alphabetic beginning with 2010 MY. ROW model characters, where different, are listed in parenthesis (), for reference only.
******** Jetta and Jetta SportWagen models are identified by WMI code of **WWW**.
********* Beetle and Beetle Conv. models are identified by WMI code of **WVG**.

October 30, 2013 (Rev 4)

Vehicle Identification

2014 Restraint System:

All = Active-DIF/Pass - Front Air Bag - DIF/Pass
3 (Tiguan) = Advanced Front Air Bags + Side Impact Air Bags - Front + Side Curtain Air Bags + 4 Star Crash Rated
5 (Jetta Only) or **7** (Jetta SportWagen/CC/Passat) = Advanced Front Air Bags + Side Impact Air Bags - Fr. + Side Curtain Air Bags + 4 Star Crash Rated
7 (Beetle/Beetle Conv.) = Advanced Front Air Bags + Side Impact Air Bags - Front + 3 Star Crash Rated
8 (Eos Only) = Advanced Front Air Bags + Side Impact Air Bags - Front + Knee Air Bags - Front + Side Curtain Air Bags
9 (Touareg) = Advanced Front Air Bags + Side Impact Air Bags - Front + Side Curtain Air Bags

2014 Volkswagen VIN Decoder (except Routan)

Country of origin	1
Manufacturer	2
Vehicle Type	3
Series	4
Engine	5
Restraint system	6
Model (position 7 & 8)	7, 8
Check digit	9
Model year	10
Assembly plant	11
Sequential Product Number	12-17
Sequential production number (position 12 - 17)	12-17

M = 1991
 N = 1992
 P = 1993
 R = 1994
 S = 1995
 T = 1996
 V = 1997
 W = 1998
 X = 1999
 Y = 2000
 1 = 2001
 2 = 2002
 3 = 2003
 4 = 2004
 5 = 2005
 6 = 2006
 7 = 2007
 8 = 2008
 9 = 2009
 A = 2010
 B = 2011
 C = 2012
 D = 2013
E = 2014

SALES CODES

Engine Codes

CNLA	1.4L 4-cylinder 4V
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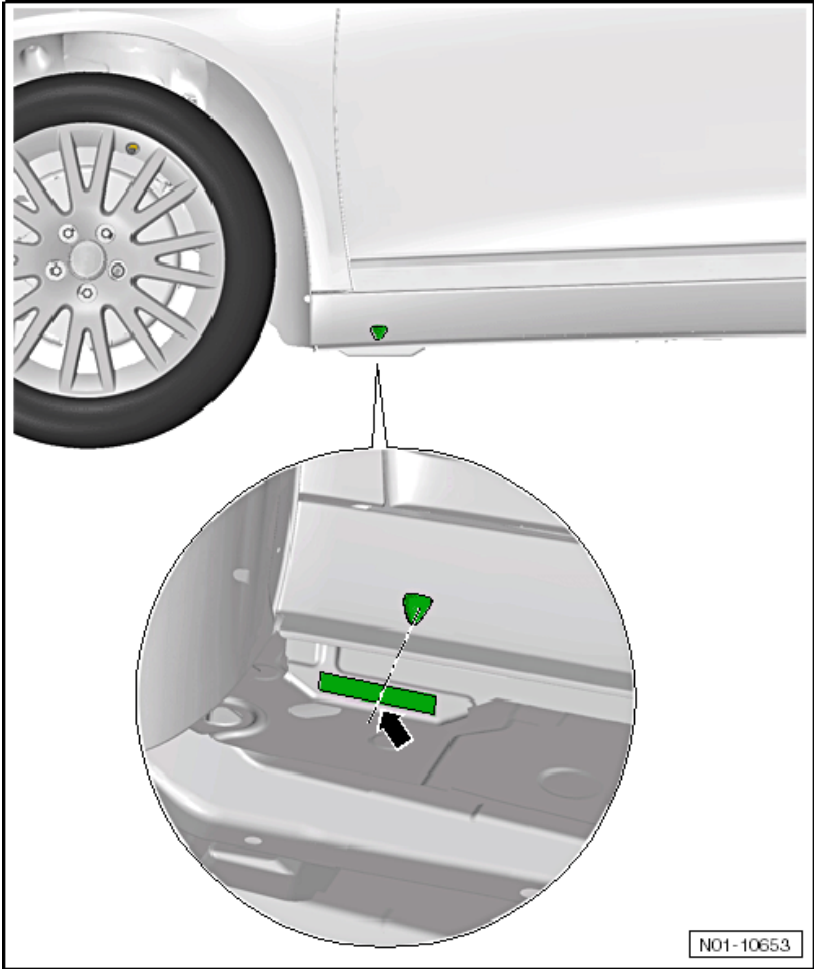
Transmission Codes

0CG	7-speed direct shift
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VEHICLE LIFTING

Hoist and Jack Mounting Points

Front

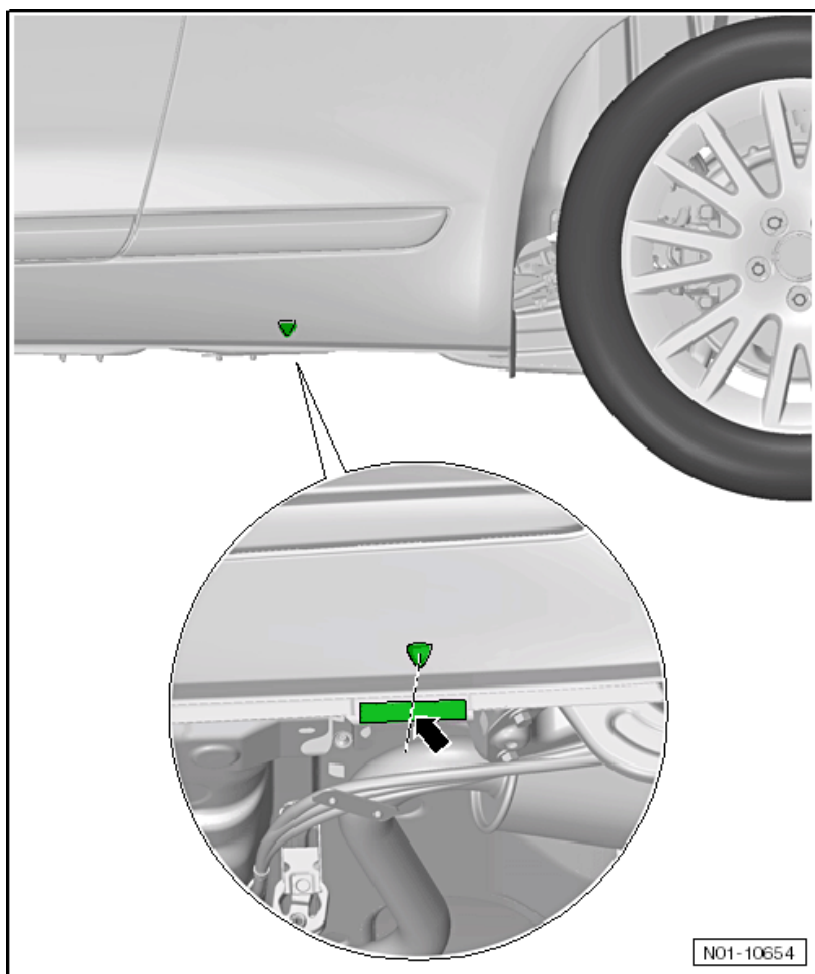


Position the support plate in the side member vertical reinforcement area ➡.

Sales
Codes

Vehicle
Lifting

Rear

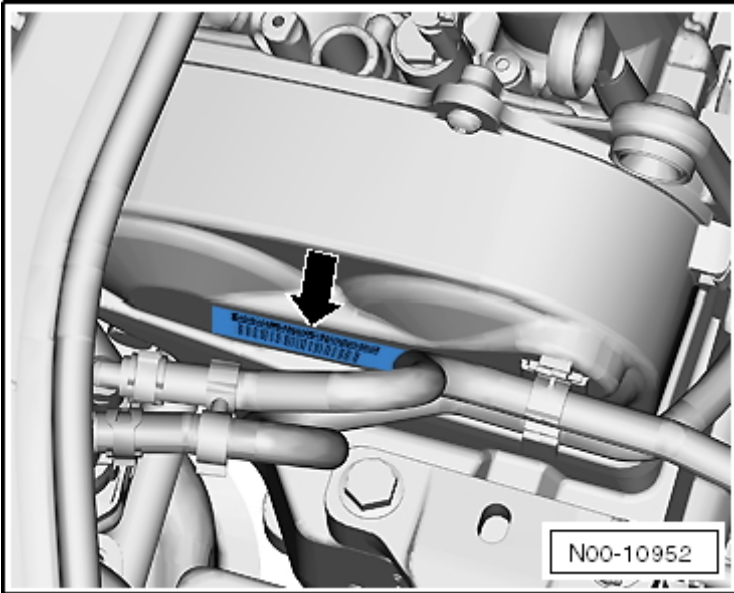


Position the support plate in the side member vertical reinforcement area ➡.

ENGINE – 1.4L CNLA

General Information – 1.4L CNLA

Engine Number



The label ➔ on the upper toothed belt cover lists the engine code and the engine serial number.

The engine code can also be found on the vehicle data label and on the crankcase above the transmission.

The engine number consists of up to nine alphanumeric characters.

The first part (maximum 3 letters) represents the “engine code”, the second (six digit) is the “serial number”. If more than 999,999 engines with the same engine code are produced, the first of the six characters is replaced with a letter.

Vehicles with a Four Digit Engine Code:

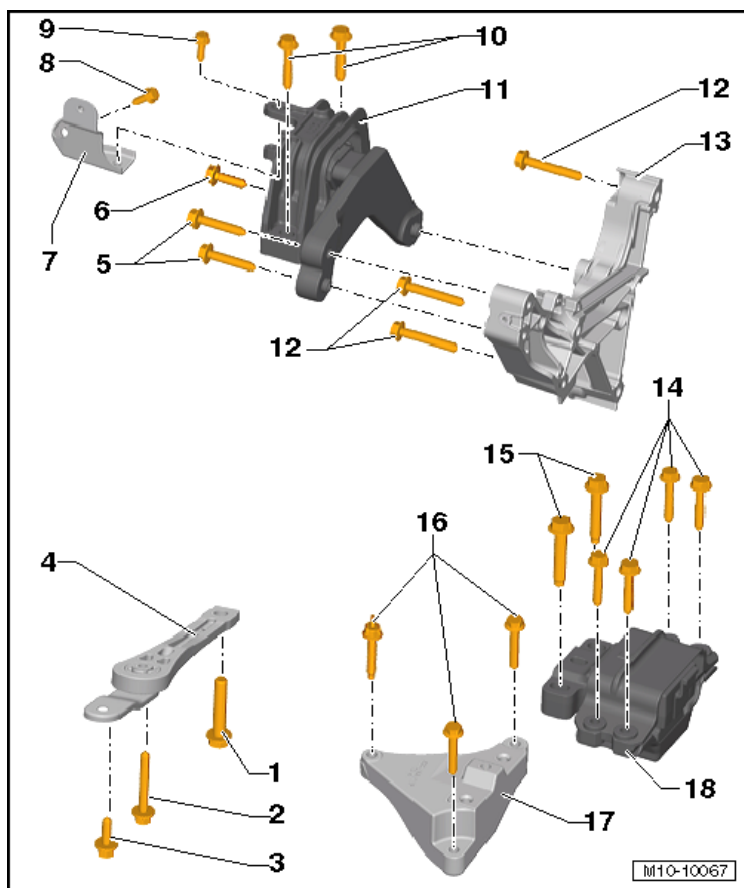
- Four digit engine codes begin with the letter “C”.
- The first three positions describe the engine type and are stamped onto the engine.
- The fourth position describes the engine output and torque.
- The 4 digit engine code is also stored in the ECM and is also found on the type plate and the vehicle data label.

Engine Data

Code Letters		CNLA
Manufactured		from 07012
Emission values in accordance with		ULEV2/SULEV
Displacement	cm3	1395
Output	kW at RPM	110/5000
Torque	Nm at RPM	250/1400-3500
Bore	Diameter mm	74.5
Stroke	mm	80.0
Compression ratio		10.5
Valves per cylinder		4
Research Octane Number (RON)	Minimum	95 unleaded (in exceptional cases, minimum 91 RON, but with reduced performance)
Fuel injection		Motronic ME 1701.6
Ignition sequence		1-3-4-2
Secondary Air Injection (AIR) system		Yes

Engine Assembly – 1.4L CNLA

Engine and Transmission Mount Overview



1 - Bolt

- Tightening specification see Pendulum Support below
- Replace after removing

2 - Bolt

- Tightening specification see Pendulum Support below
- Replace after removing

3 - Bolt

- Tightening specification see Pendulum Support below
- Replace after removing

4 - Pendulum Support

5 - Bolt

- 40 Nm + 90° turn
- Replace after removing

6 - Bolt

- 40 Nm + 90° turn
- Replace after removing

7 - Bracket

8 - Bolt

- 20 Nm + 90° turn
- Replace after removing

9 - Bolt

- 20 Nm + 90° turn
- Replace after removing

10 - Bolt

- 40 Nm + 90° turn
- Replace after removing

11 - Engine Mount

12 - Bolt

- 40 Nm + 90° turn
- Replace after removing

13 - Engine Bracket

14 - Bolt

- 50 Nm + 90° turn
- Replace after removing

15 - Bolt

- 60 Nm + 90° turn
- Replace after removing

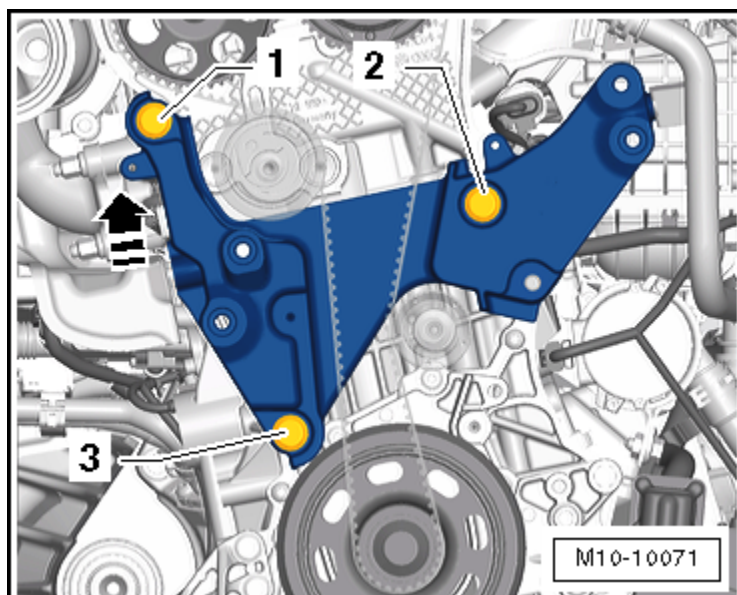
16 - Bolt

- 40 Nm + 90° turn
- Replace after removing

17 - Transmission Bracket

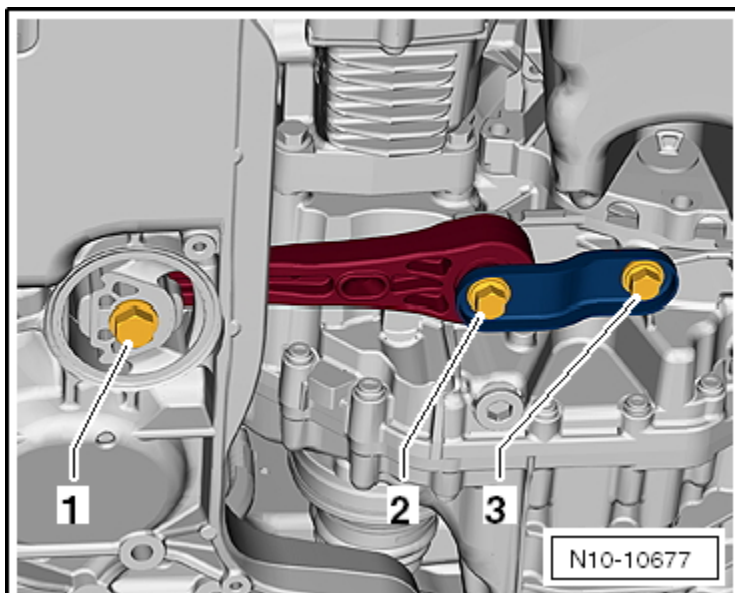
18 - Transmission Mount

Engine Bracket Tightening Specifications



Stage	Bolts	Tightening specification/additional turn
1	1 to 3	Install so that they are loose
2	1 to 3	Push the engine mount bracket upward in -direction of arrow- and tighten it hand-tight so that it cannot move anymore.
3	1 to 3	40 Nm
4	1 to 3	Tighten an additional 90° (¼ turn)

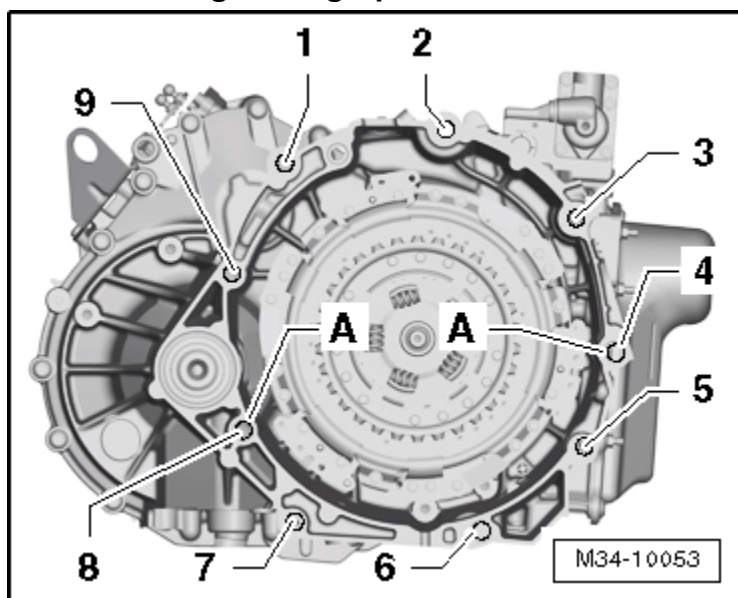
Pendulum Support Tightening Specifications



Replace the bolts that have been tightened to additional torque.

Stage	Bolts	Tightening specification/additional turn
1	2, 3	50 Nm
2	1	130 Nm
3	1 to 3	Tighten an additional 90° (¼ turn)

DSG Transmission to Engine Tightening Specifications



Replace the bolts that have been tightened to additional torque.

Item	Bolt	Nm
1, 2	M12 x 50	80
3, 4	M12 x 105	80
5, 6, 7	M10 x 50	40
8, 9 ¹⁾	M12 x 70	80
A	Alignment sleeves for centering	

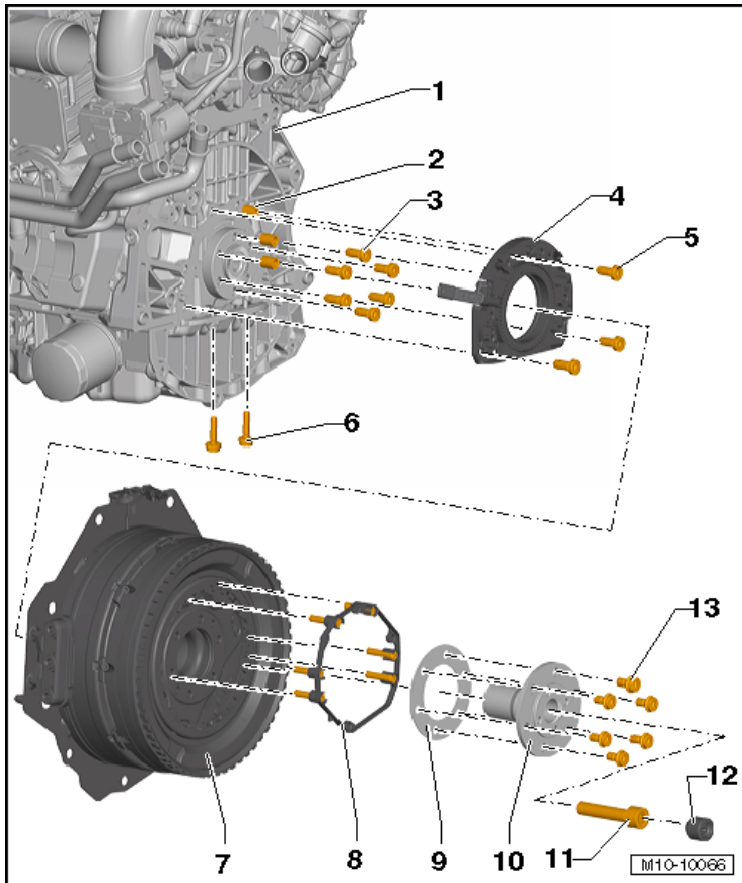
• Bolted from the engine side

Fastener Tightening Specifications

Component	Fastener size	Nm
Bolts and nuts	M6	9
	M7	15
	M8	20
	M10	40
	M12	65

Crankshaft, Cylinder Block – 1.4L CNLA

Cylinder Block Overview, Belt Pulley Side



1 - Engine

2 - Openings

3 - Crankshaft Bolts

10 Nm

Replace after removing

4 - Sealing Flange with Sensor Wheel and Seal

5 - Bolt

Tightening specification, see Ribbed Belt Transmission Side Sealing Flange - Tightening Specifications and Sequence below

6 - Bolt

Tightening specification, see Ribbed Belt Transmission Side Sealing Flange - Tightening Specifications and Sequence below

7 - Electro-Drive Drive Motor -V141-

8 - Bolts

- 18 Nm + 30° turn
- Replace after removing

9 - Adjusting Shims

10 - Flange

11 - Bolts

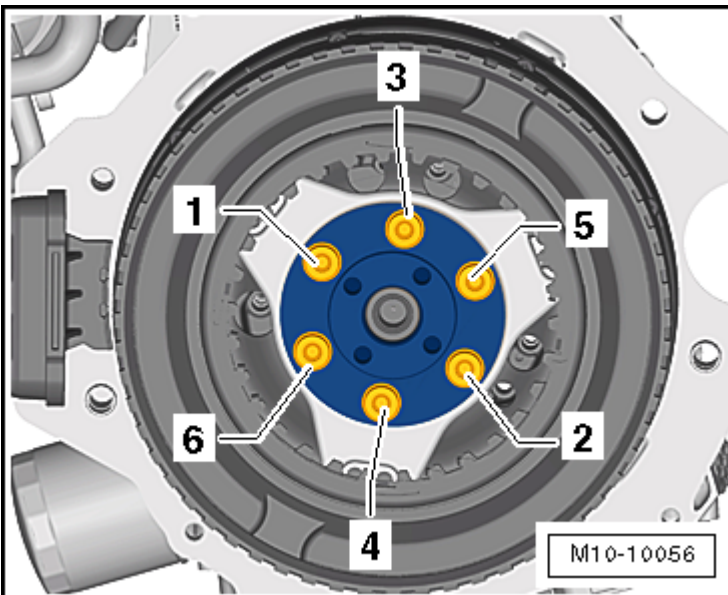
- 180 Nm + 180° turn
- Replace after removing

12 - Needle Bearing

13 - Bolt

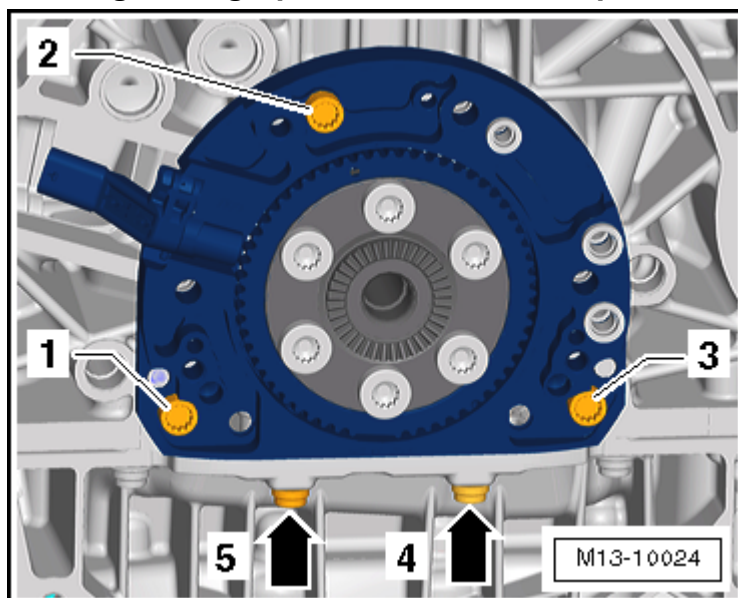
- Replace after removing

Crankshaft Flange to Drive Motor - Tightening Sequence and Tightening Specification



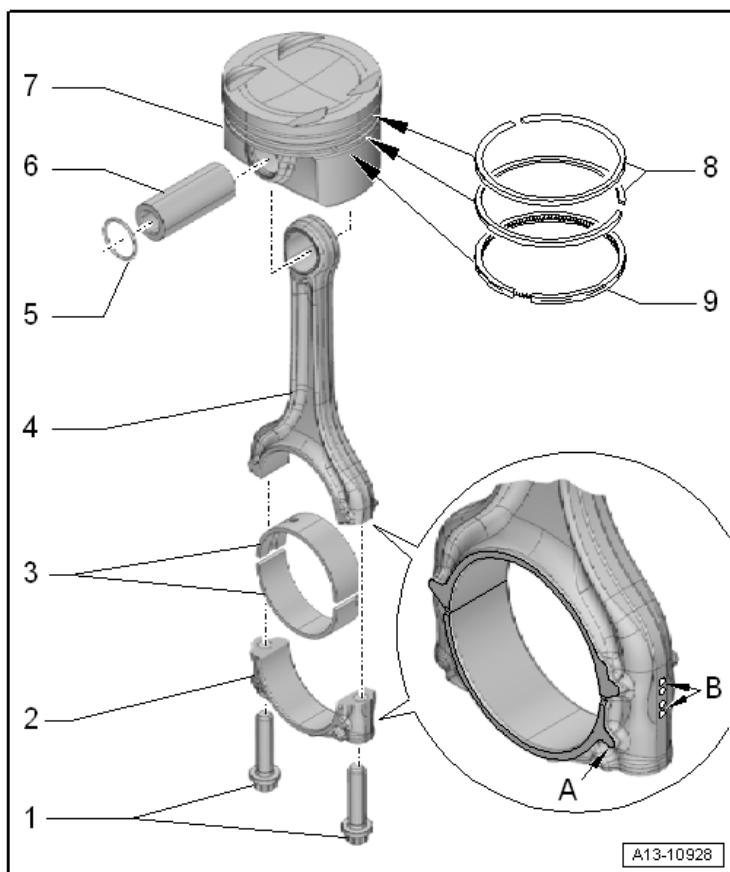
Stage	Bolts	Tightening specification/additional turn
1	1 to 6	Install all the way in by hand.
2	1 to 6	Tighten lastly to 60 Nm in diagonal sequence and in stages
3	1 to 6	Tighten further 90° diagonally and in steps

Ribbed Belt Transmission Side Sealing Flange - Tightening Specifications and Sequence



Stage	Bolts	Tightening specification/additional turn
1	1 to 5	Install all the way in by hand.
2	1 to 5	Tighten lastly to 10 Nm in diagonal sequence and in stages

Pistons and Connecting Rods Overview



1 - Connecting Rod Bolts

- 30 Nm + 90° turn
- Replace after removing
- Lubricate the thread and contact surface.

2 - Connecting Rod Bearing Cap

- Exhaust side

3 - Bearing Shells

4 - Connecting Rod

5 - Locking Ring

6 - Piston Pin

7 - Piston

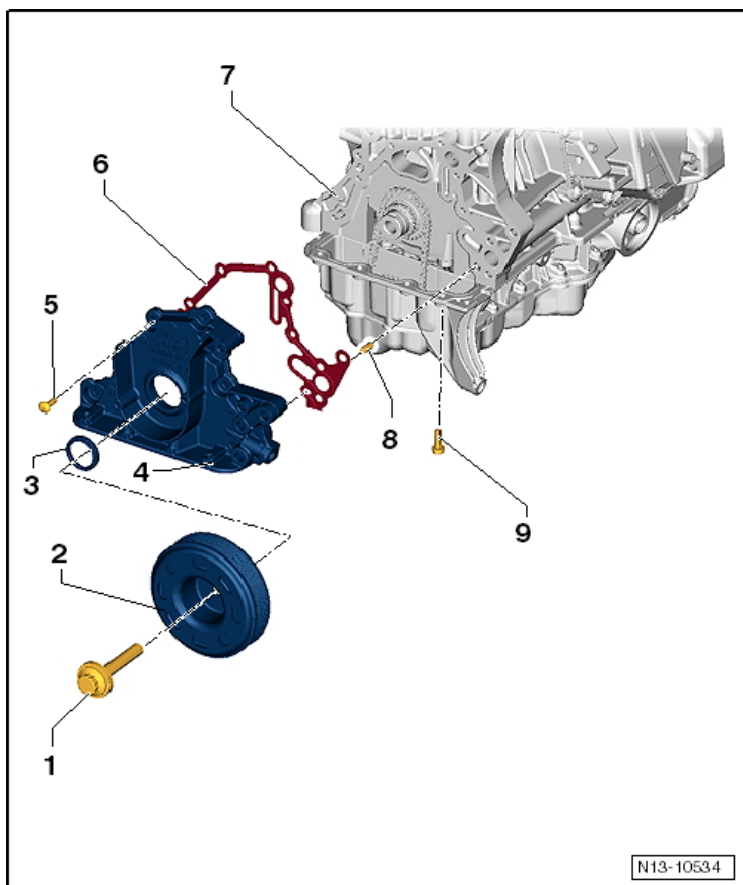
8 - Piston Rings

9 - Piston Ring

Oil Spray Jet and Pressure Relief Valve (not illustrated)

- 27 Nm

Sealing Flange Belt Pulley Side Overview



1 - Bolt

- 150 Nm + 180° turn
- Replace after removing

2 - Vibration Damper

3 - Seal

4 - Sealing Flange (Belt Pulley Side)

5 - Bolt

- Tightening specification and sequence, see Ribbed Belt Pulley Side Sealing Flange - Tightening Specifications and Sequence below

6 - Seal

- Replace after removing

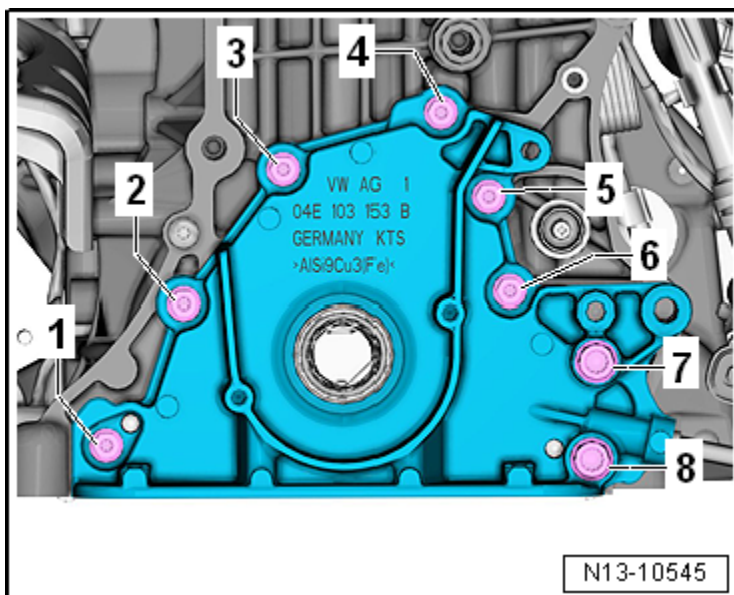
7 - Cylinder Block

8- Alignment Pin

9- Bolt

- Tightening specification and sequence, see Ribbed Belt Pulley Side Sealing Flange - Tightening Specifications and Sequence below

Ribbed Belt Pulley Side Sealing Flange - Tightening Specifications and Sequence



Stage	Bolts	Tightening specification/additional turn
1	1 through 8	Install all the way in by hand.
2	1 through 8	In a diagonal sequence, to 8 Nm
3	7 and 8	20 Nm
4	1 through 8	Tighten 90° additional turn

Crankshaft Dimensions

Honing dimension in mm	Connecting rod journal diameter mm	
Basic dimension	48.00	- 0.022
		- 0.042

Piston Dimension

Piston diameter in mm	
Nominal dimension	74.42 ¹⁾

¹⁾ Dimension without coating (thickness 0.018 mm each side).

Cylinder Bore Dimension

Cylinder Bore diameter in mm	
Nominal dimension	74.5 + 0.015 ¹⁾ + 0.005

¹⁾ Measurement of cylinder bore may not be performed when the cylinder block is mounted in the Engine and Transmission Holder -VAS 6095-, false measurements are possible.

Piston Ring End Gap

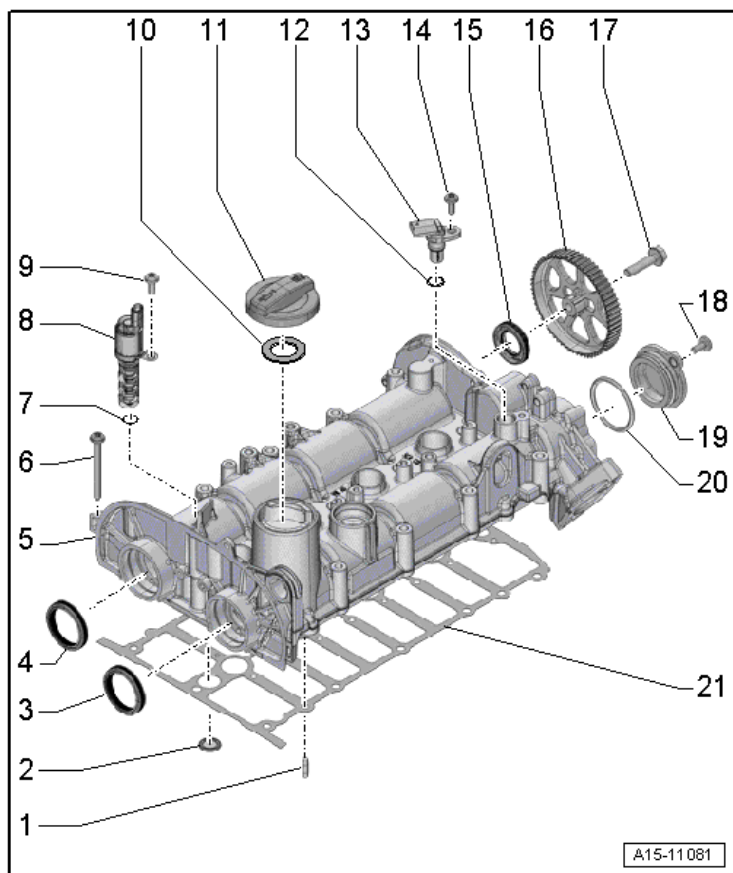
Piston ring gap Dimensions in mm	New	Wear limit
Compression rings	0.20 + 0.15	1.0
Oil scraping ring	0.25 + 0.20	3.0

Piston Ring Groove Clearance

Piston ring to groove clearance Dimensions in mm	New	Wear limit
1st Compression rings	0.05 to 0.09	0.5
2nd Compression rings	0.03 to 0.07	0.15
Oil scraping ring	Cannot be measured	

Cylinder Head, Valvetrain – 1.4L CNLA

Camshaft Housing Overview



1 - Alignment Pin

2 - Seal

3 - Seal

4 - Seal

5 - Camshaft Housing

6 - Bolt

Tightening specification and sequence, see Tightening Specification and Sequence for the Camshaft Housing below

7 - O-ring

8 - Camshaft Adjustment Valve 1 -N205-

9 - Bolt

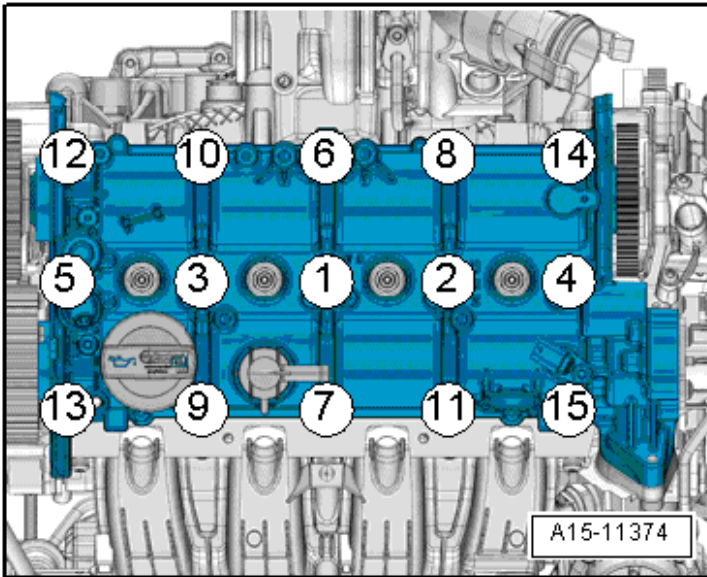
8 Nm

10 - Seal

11 - Cover

- 12 - O-ring
- 13 - Camshaft Position Sensor -G40-
- 14 - Bolt
 - 8 Nm
- 15 - Seal
- 16 - Toothed Belt Sprocket
- 17 - Bolt
 - See Coolant Pump/Thermostat Overview, Version 1
- 18 - Bolt
 - 8 Nm
- 19 - Cover
- 20 - O-ring
 - Replace after removing
- 21 - Seal
 - Replace after removing

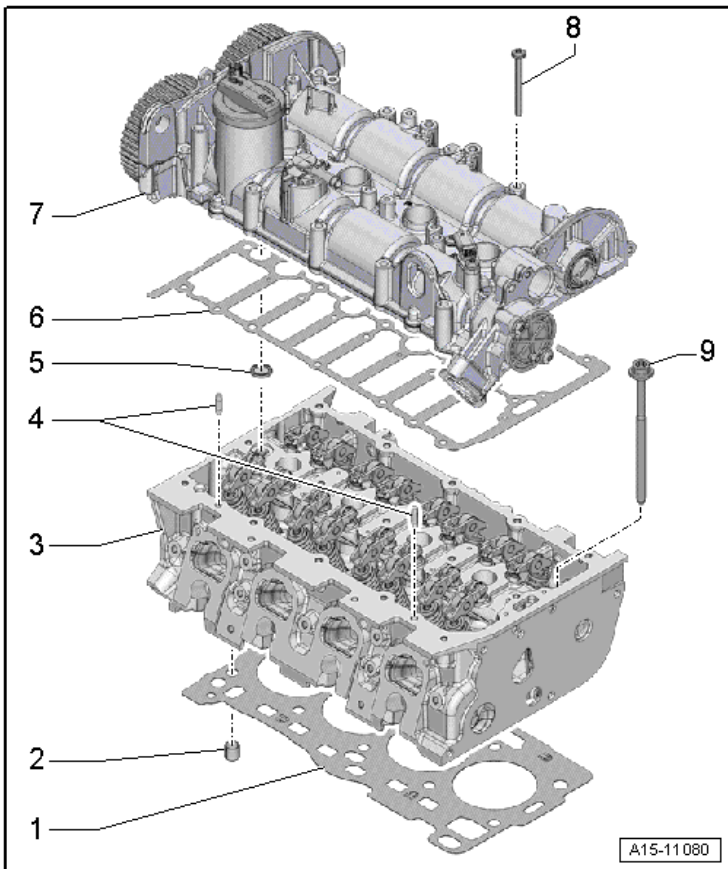
Camshaft Housing Tightening Specification and Sequence



Replace the bolts that have been tightened to additional torque.

Stage	Bolts	Tightening specification/additional turn
1	1 to 15	10 Nm
2	1 to 15	Tighten 180° additional turn

Cylinder Head Overview



1 - Cylinder Head Gasket

2 - Alignment Sleeve

3 - Cylinder Head

4 - Alignment Pins

5 - Cylinder Block

6 - Seal

7 - Camshaft Housing

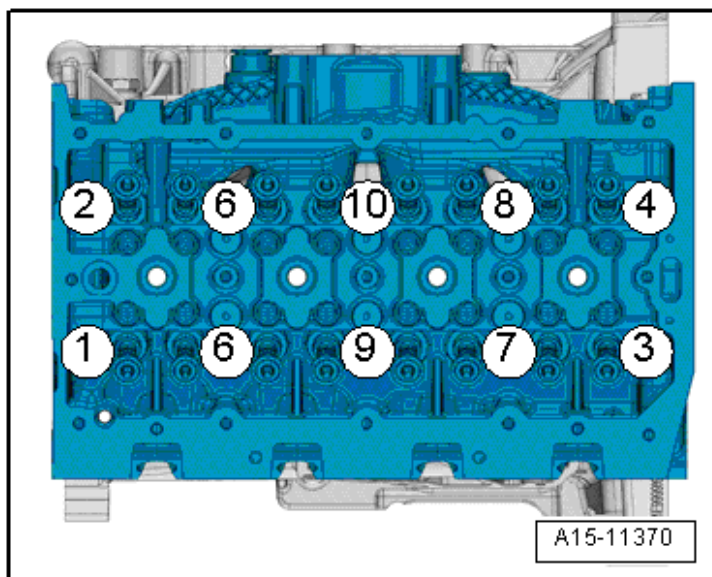
8 - Bolt

- Tightening specification and sequence, see Tightening Specification and Sequence for the Camshaft Housing

9 - Bolt

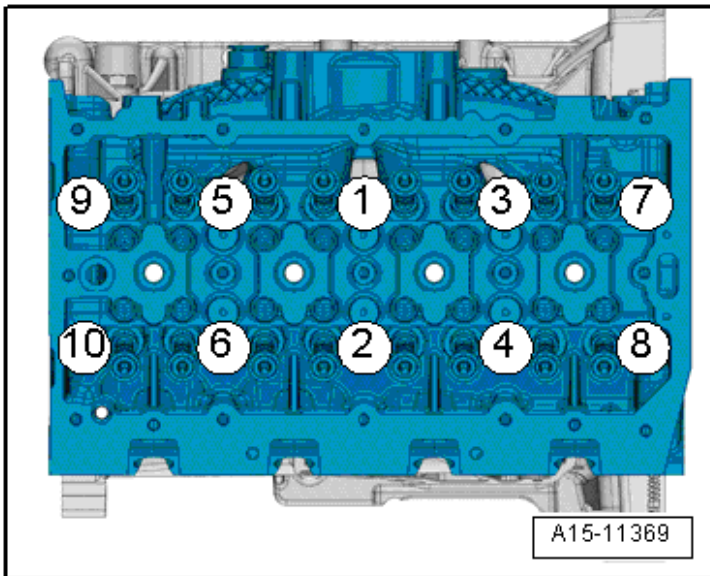
- Loosening sequence → Anchor
- Replace after removing
- Tightening specification and sequence, see Cylinder Head - Tightening Specification and Sequence.

Cylinder Head Loosening Sequence



Loosen and remove the cylinder head bolts in -1 to 10- sequence.

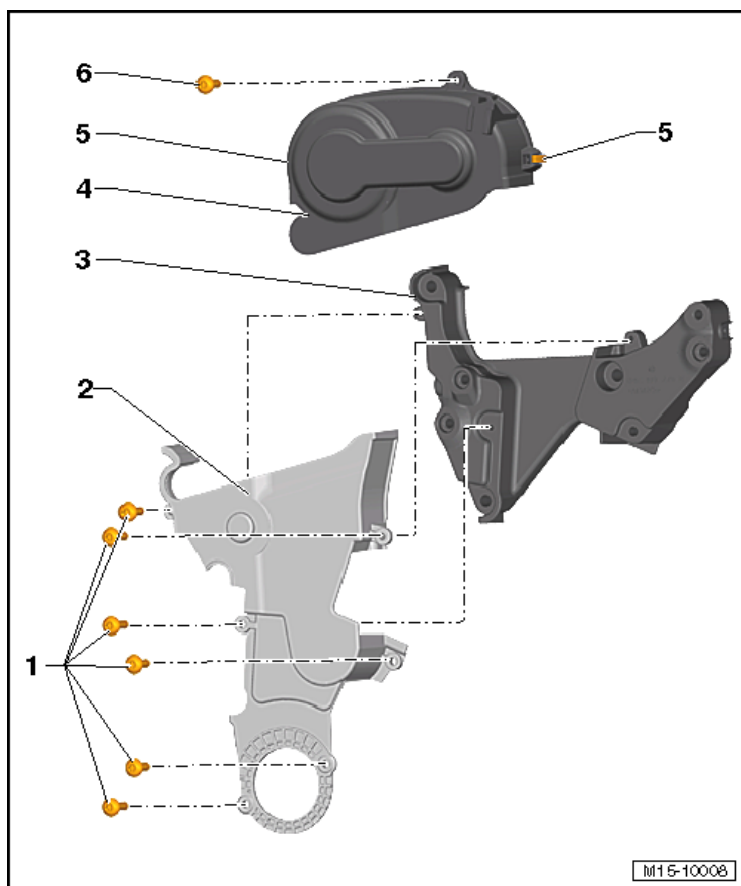
Cylinder Head Tightening Specification and Sequence



Replace the bolts that have been tightened to additional torque.

Stage	Bolts	Tightening specification/additional turn
1	1 to 10	40
2	1 to 10	Tighten an additional 90° (¼ turn)
3	1 to 10	Tighten an additional 90° (¼ turn)
4	1 to 10	Tighten an additional 90° (¼ turn)

Toothed Belt Guards Overview



1 - Bolt

□ 8 Nm

2 - Lower Toothed Belt Guard

3 - Engine Bracket

4 - Upper Toothed Belt Guard

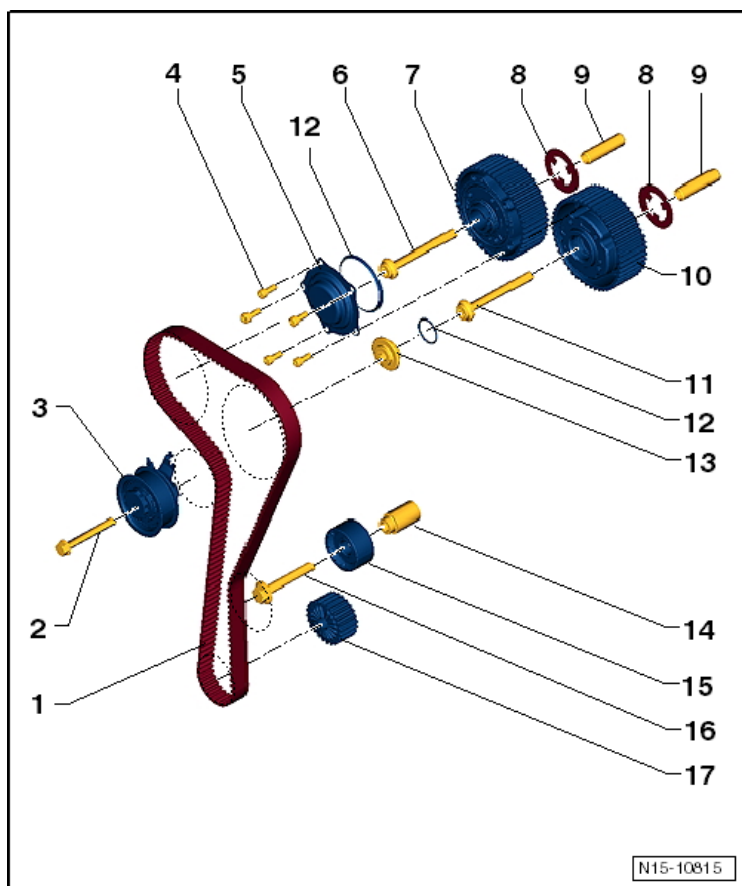
5 - Spring Clip

6 - Bolt

□ 8 Nm

Engine –
1.4L CNLA,

Toothed Belt Overview



1 - Toothed Belt

2 - Bolt

25 Nm

3 - Tensioning Roller

4 - Bolt

8 Nm + 45° turn

Replace after removing

5 - Cover

6 - Bolt

50 Nm + 135° turn

Replace after removing

7 - Exhaust Camshaft Toothed Belt

8 - Washer

9 - Guide Sleeve

10 - Intake Camshaft Toothed Belt

11 - Bolt

- 50 Nm + 135° turn
- Replace after removing

12 - O-ring

- Replace after removing

13 - Drain Plug

- 20 Nm

14 - Spacing Sleeve

15 - Idler Roller

16 - Bolt

- 45 Nm

17 - Crank Shafts - Toothed Belt Gear

Bolt for “TDC” hole in the cylinder block (not illustrated)

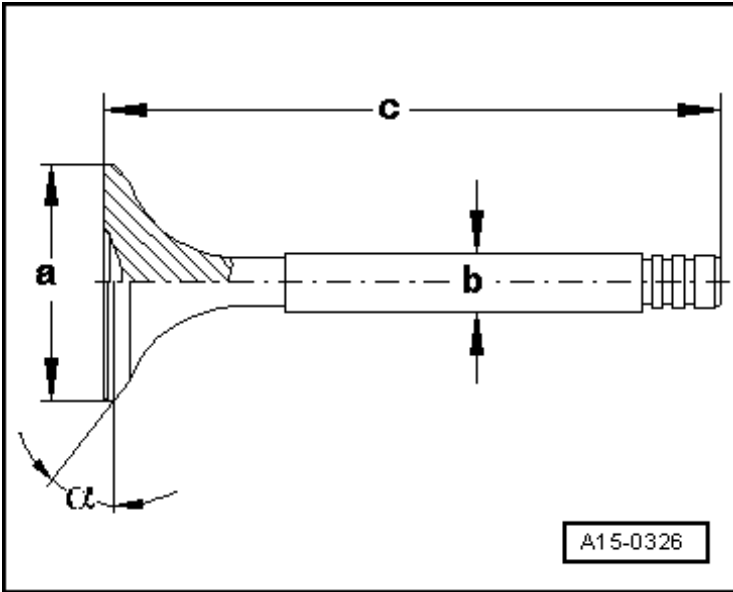
- 30 Nm

8 - Needle Bearing Rim

9 - 4 Nm + 45° turn

- Replace after removing
- Replace after removing

Valve Dimensions

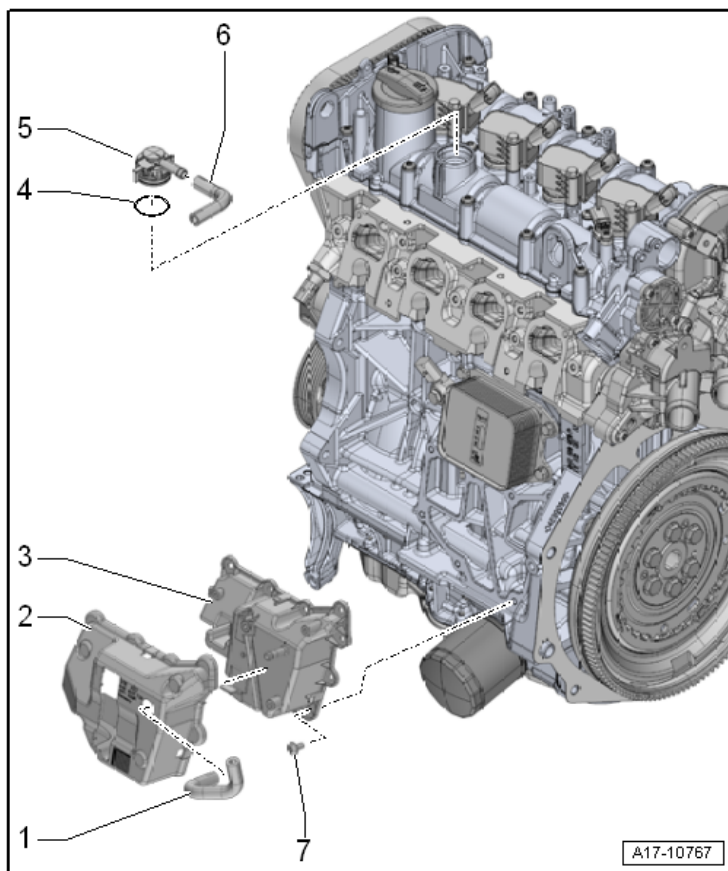


Intake and exhaust valves must not be re-faced by grinding. Only lapping is permitted.

Dimension		Intake Valve	Exhaust Valve
Diameter a	mm	28.5	25.0
Diameter b	mm	4.973	4.963
c	mm	110.25	110.09
α	\angle°	45	45

Lubrication – 1.4L CNLA

Crankcase Ventilation Overview



1 - Hose

2 - Cover

3 - Oil Separator

4 - O-ring

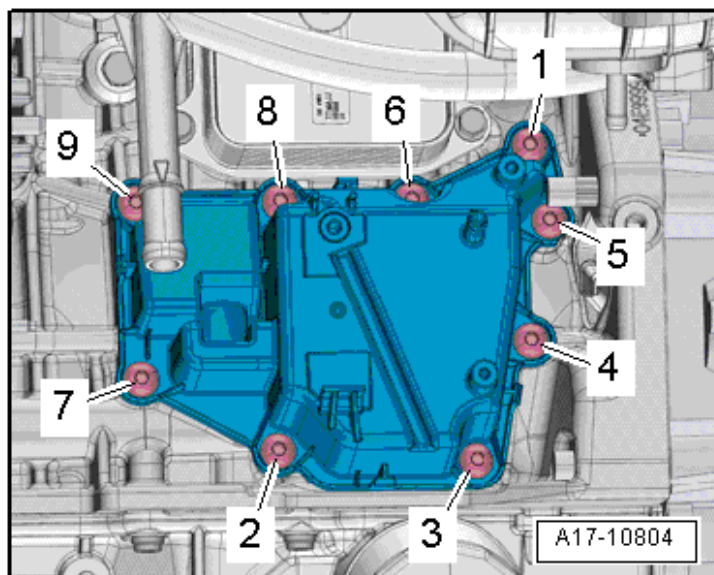
5 - Connection

6 - Hose

7 - Bolt

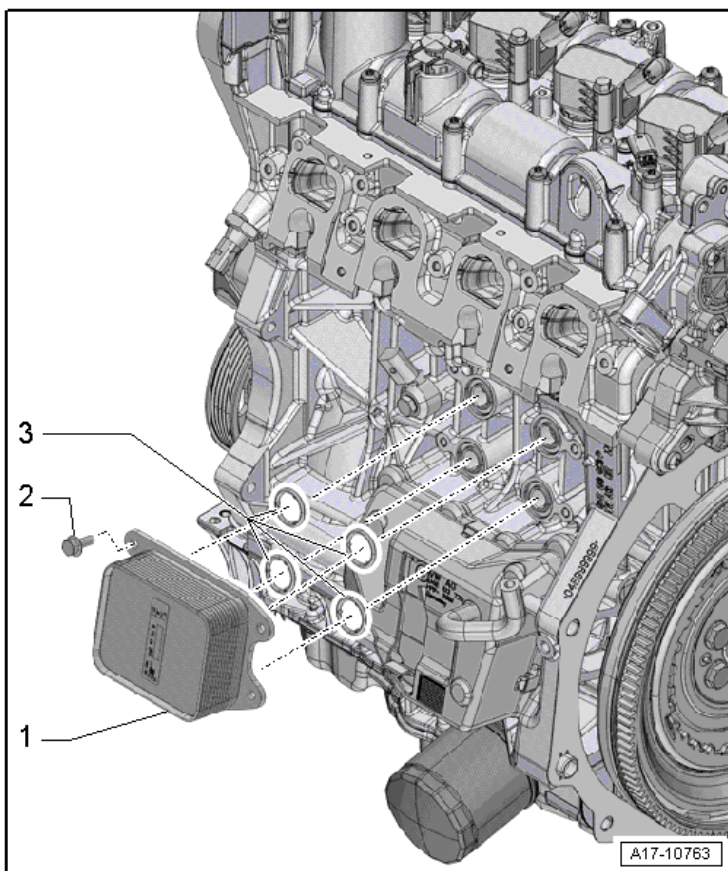
- Tightening specification and sequence, see Oil Separator - Tightening Specification and Sequence below
- Replace after removing

Oil Separator Tightening Specification and Sequence



Tighten the bolts to 9 Nm in the following sequence: -1 to 9-.

Engine Oil Cooler Overview



1 - Engine Oil Cooler

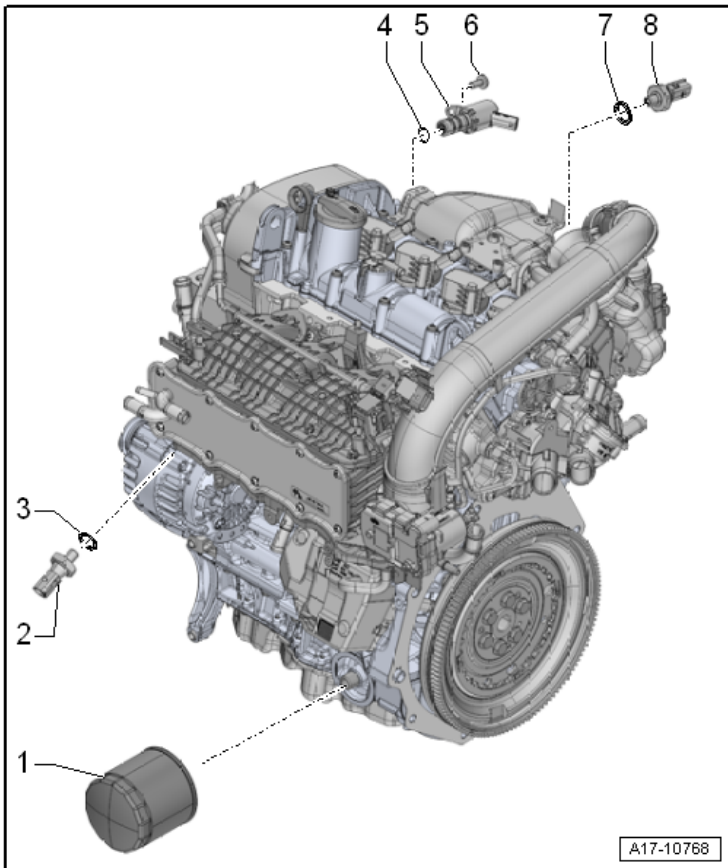
2 - Bolt

- 8 Nm + 90° turn
- Replace after removing

3 - Seals

- Replace after removing

Oil Filter/Oil Pressure Switch Overview



1 - Oil Filter

- 20 Nm

2 - Reduced Oil Pressure Switch -F378-

- 20 Nm

3 - Seal

- Replace after removing

4 - O-ring

- Replace after removing

5 - Oil Pressure Regulation Valve -N428-

6 - Bolt

- 8 Nm

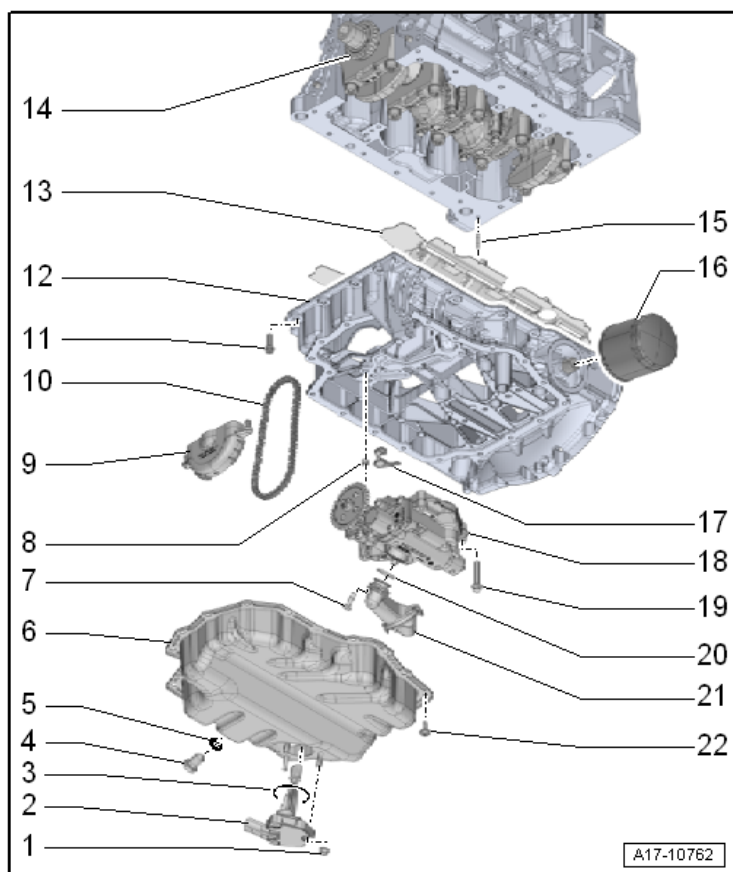
7 - Seal

- Replace after removing

8 - Oil Pressure Switch -F22-

- 20 Nm

Oil Pan/Oil Pump Overview



1 - Nut

- 25 Nm

2 - Oil Level Thermal Sensor -G266-

3 - Seal

- Replace after removing

4 - Oil Drain Plug

- 30 Nm
- Replace after removing

5 - Seal

- Replace after removing

6 - Oil Pan Lower Section

7 - Bolt

- 5 Nm + 90° turn
- Replace after removing

8 - Alignment Sleeve

9 - Cover

10 - Drive Chain

11 - Bolt

- Replace after removing
- Tightening sequence, see Oil Pan Upper Section, Tightening Specifications and Sequence below

12 - Oil Pan Upper Section

13 - Oil Baffle

14 - Chain Sprocket

15 - Alignment Pin

16 - Oil Filter

- 20 Nm

17 - Seal

18 - Oil Pump

19 - Bolt

- 10 Nm

20 - O-ring

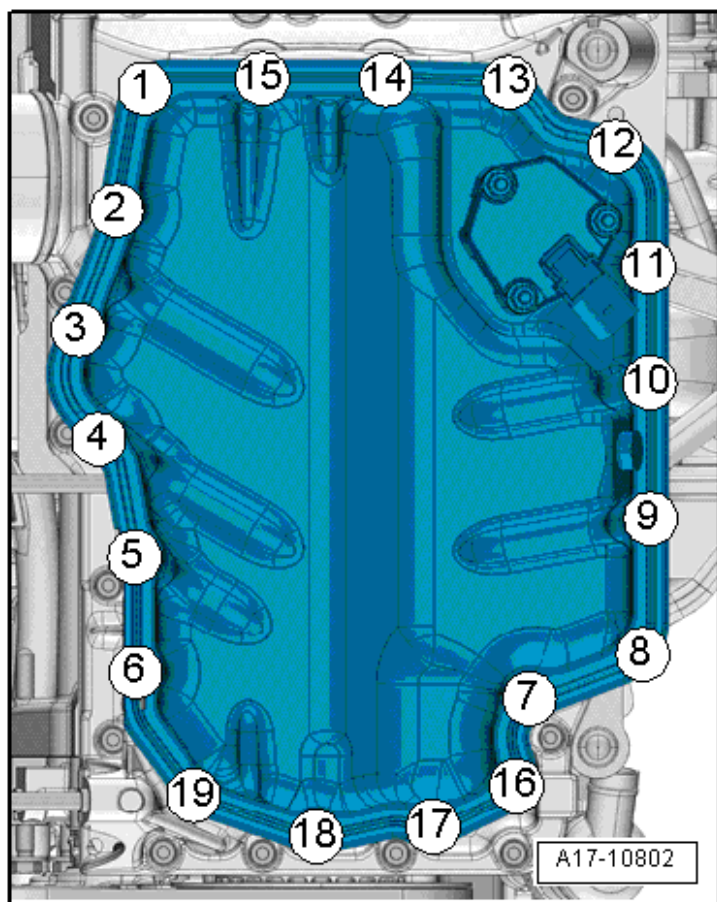
- Replace after removing

21 - Oil Intake Pipe

22 - Bolt

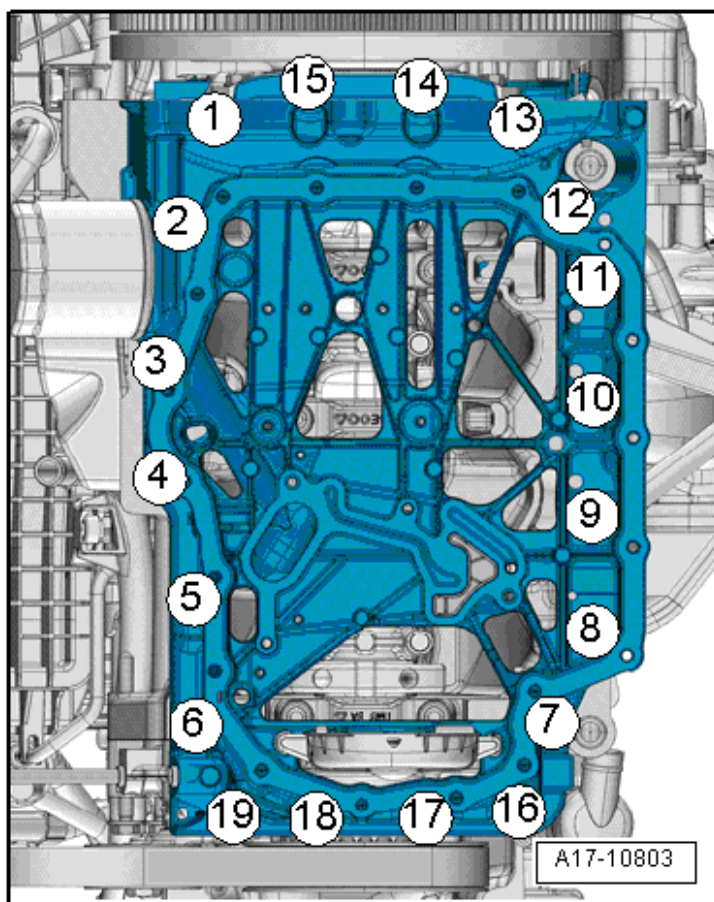
- Replace after removing
- Tightening sequence, see Lower Section of Oil Pan, Tightening Specifications and Sequence below

Lower Section of Oil Pan, Tightening Specifications and Sequence



Stage	Bolts	Tightening specification
1	1 to 19	Install all the way in by hand.
2	1 to 19	12 Nm

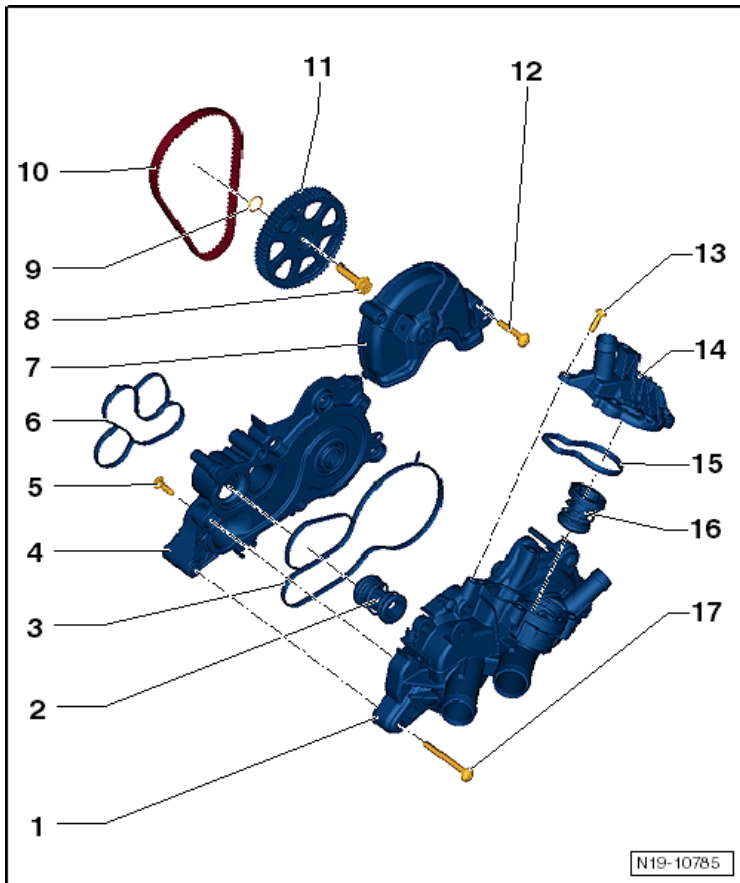
Upper Section of Oil Pan Tightening Specifications and Sequence



Stage	Bolts	Tightening specification/additional turn
1	1 to 19	Install all the way in by hand.
2	1 to 19	8 Nm
3	1 to 19	Tighten an additional 90° (¼ turn)

Cooling System – 1.4L CNLA

Coolant Pump/Thermostat Overview, Version 1



1 - Coolant Thermostat Housing

2 - Coolant Thermostat

3 - Seal

- Replace after removing

4 - Coolant Pump

5 - Bolt

- Tightening specification and sequence, see Thermostat Housing to Coolant Pump - Tightening Specification and Sequence below

6 - Seal

- Replace after removing

7 - Toothed Belt Cover

8 - Bolt

- 20 Nm + 90° turn
- Replace after removing

9 - O-ring

10 - Toothed Belt

11 - Tothed Belt Sprocket

12 - Bolt

- 8 Nm

13 - Bolt

- Tightening specification and sequence, see Coolant Thermostat Cover to Coolant Thermostat - Tightening Specification below

14 - Cover

15 - Seal

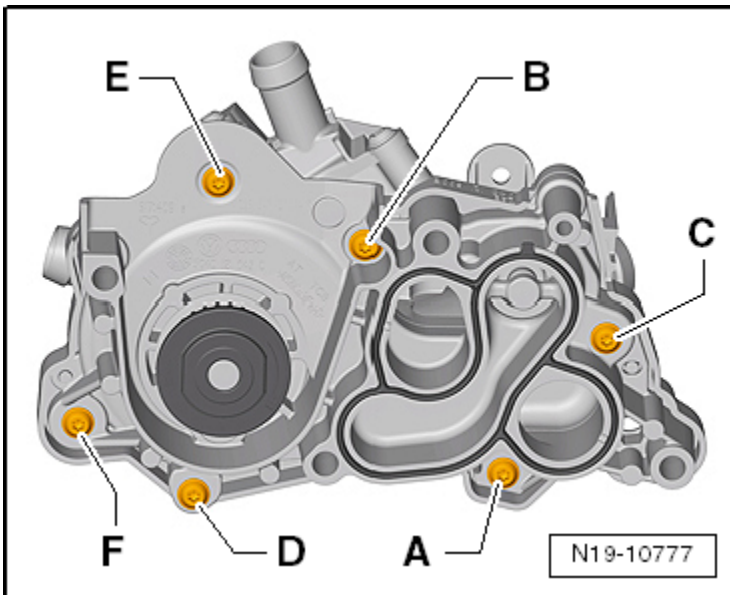
- Replace after removing

16 - Coolant Thermostat

17 - Bolt

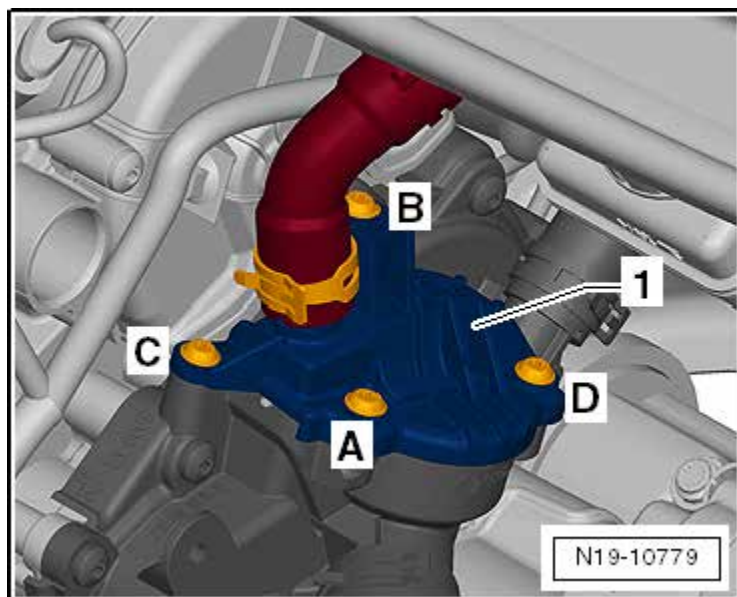
- Tightening specificati

**Thermostat Housing to Coolant Pump -
Tightening Specification and Sequence**



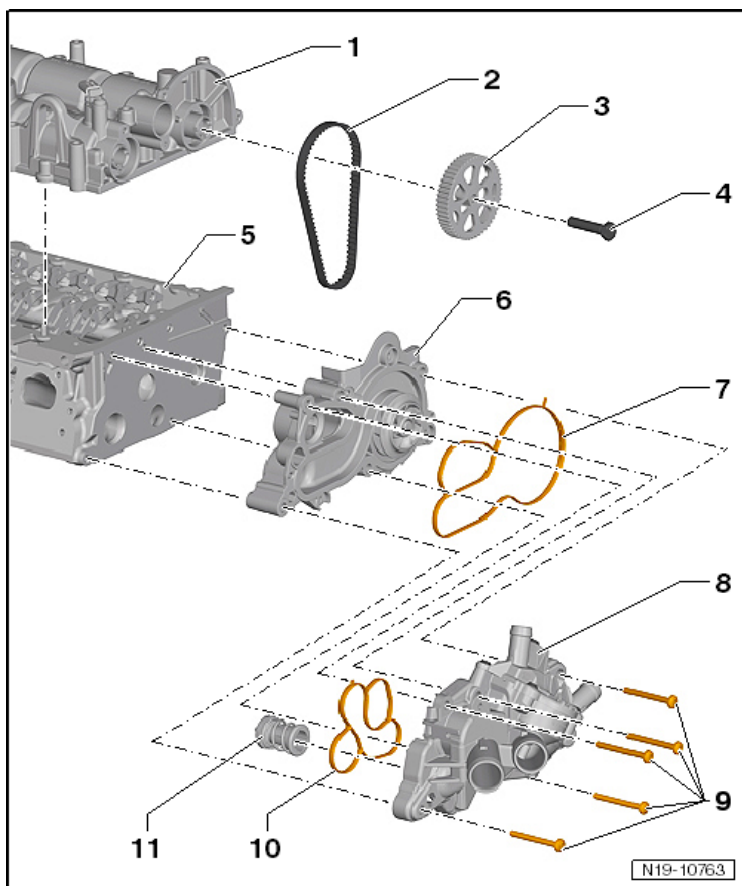
Tighten the bolts to 8 Nm in the following sequence: -A to F-.

Coolant Thermostat Cover to Coolant Thermostat - Tightening Specification



Tighten the bolts to 8 Nm for the cover -1- in the sequence -A- through -D-.

Coolant Pump/Thermostat Overview, Version 2



1 - Camshaft Housing

2 - Toothed Belt

3 - Camshaft Sprocket

4 - Bolt

20 Nm

5 - Cylinder Head

6 - Coolant Pump

7 - Coolant Pump Housing/Coolant Thermostat Housing Seal

Replace after removing

8 - Coolant Thermostat Housing

9 - Bolt

Follow the tightening sequence, see Tightening Sequence and Torque Specification from Coolant Thermometer Housing to Coolant Pump below

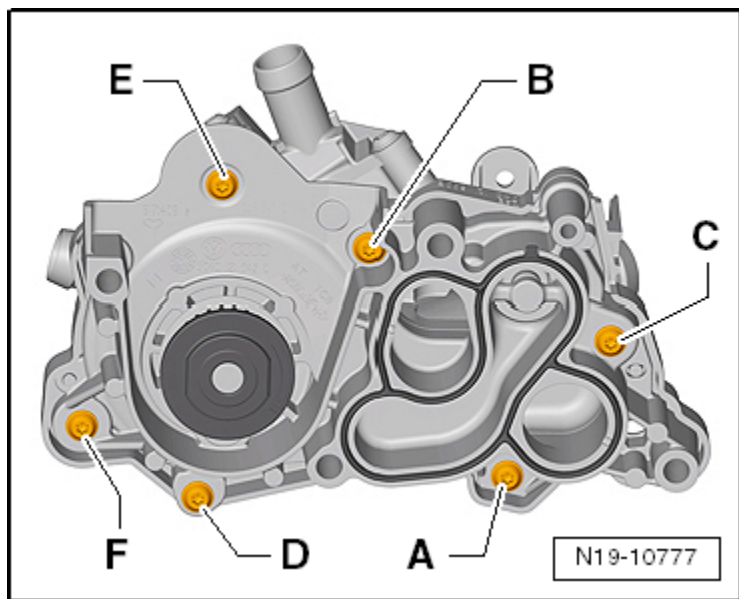
10 - Coolant Thermostat Housing Seal to Coolant Pump Housing

Replace after removing

11 - Coolant Thermostat

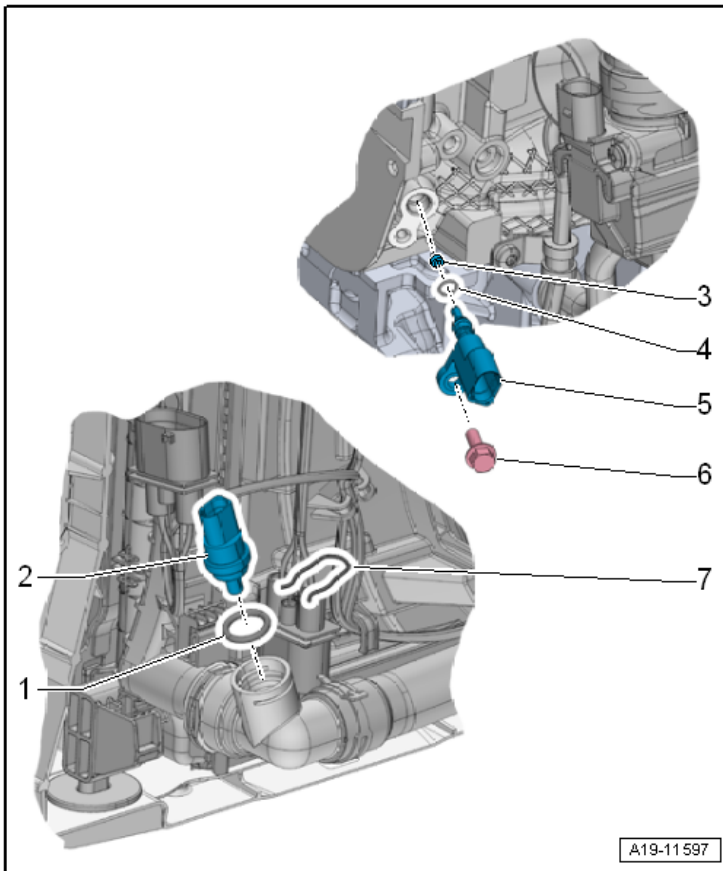
Engine –
1.4L CNLA,

Tightening Sequence and Torque Specification from Coolant Thermometer Housing to Coolant Pump



Tighten the bolts to 12 Nm in the following sequence: -A to F-.

Engine Coolant Temperature Sensors -G62- and -G83- Overview



1 - O-ring

- Replace after removing

2 - Engine Coolant Temperature Sensor on Radiator Outlet -G83-

3 - Support Ring

4 - O-ring

- Replace after removing

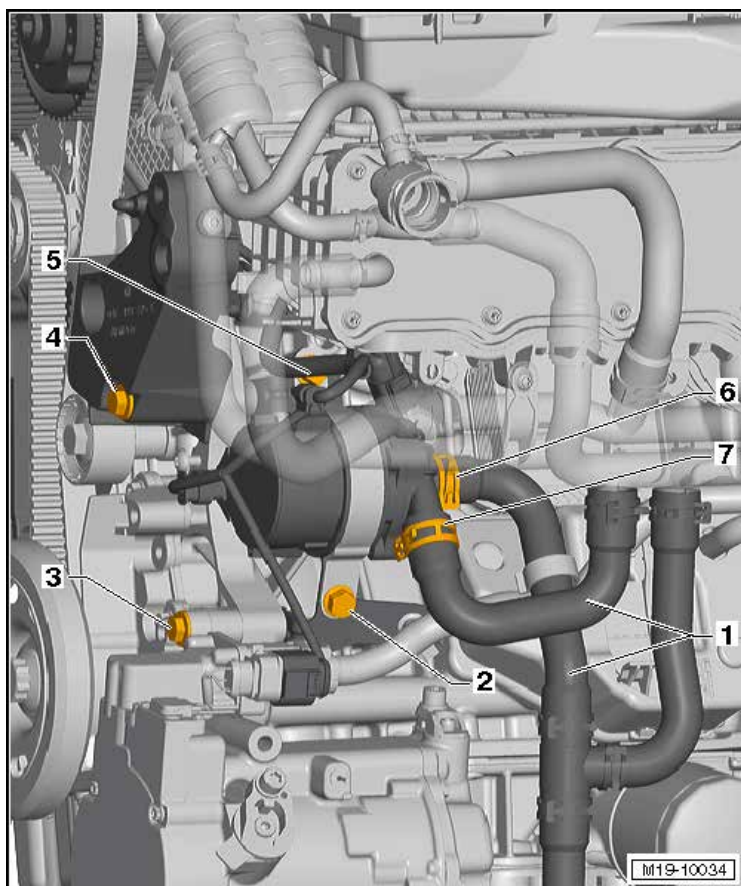
5 - Engine Coolant Temperature Sensor -G62-

6 - Bolt

- 8 Nm

7 - Clip

Low Temperature Circuit Coolant Pump -V468- Overview



1 - Coolant Hose

2 - Bolt

10 Nm

3 - Bolt

20 Nm

4 - Bolt

20 Nm

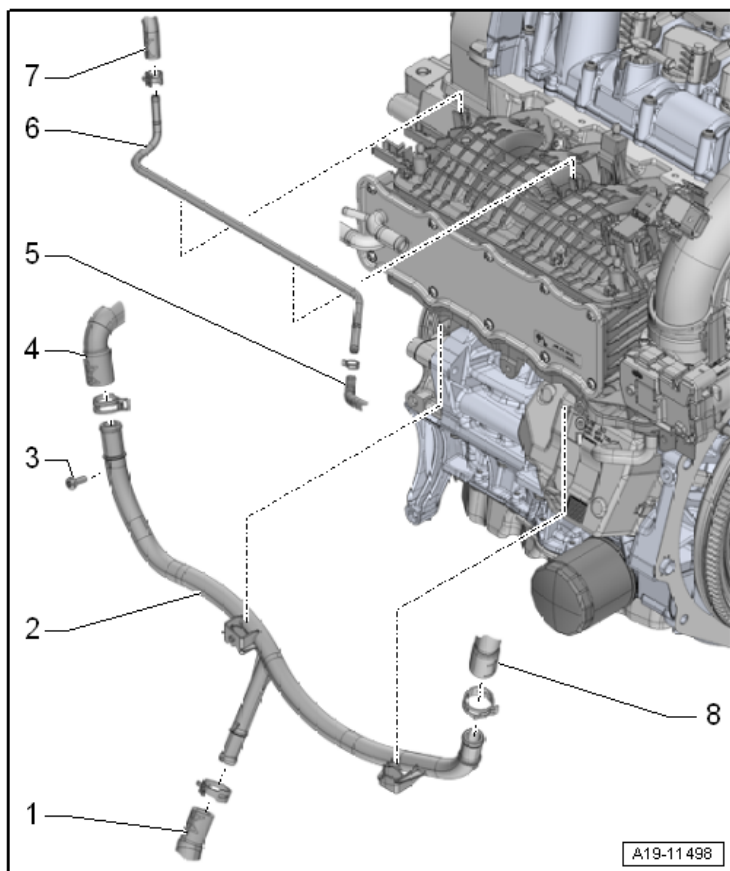
5 - Bolt

10 Nm

6 - Spring Clamp

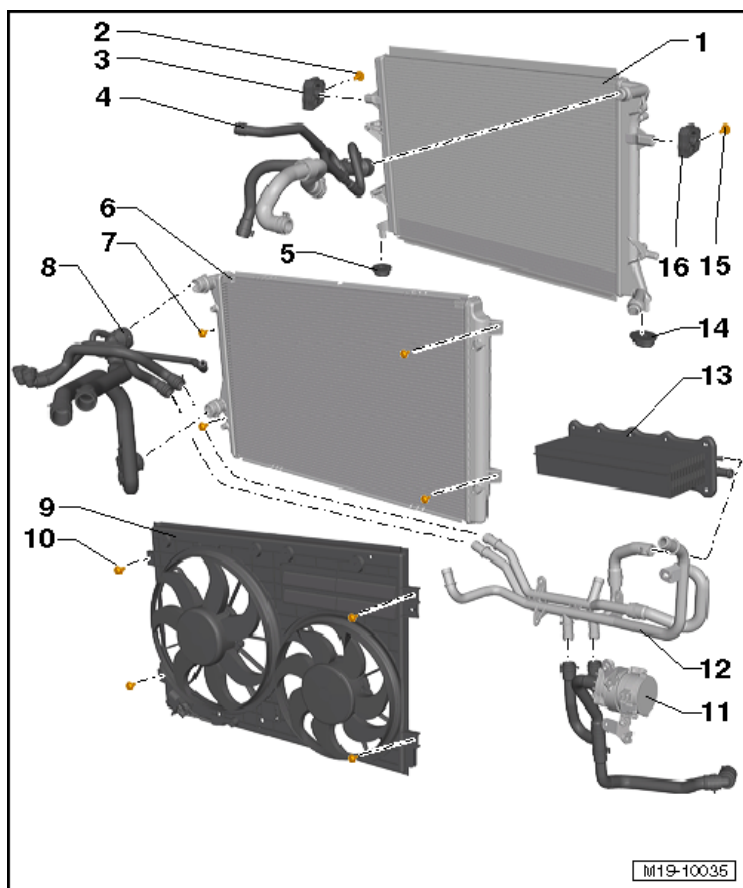
7 - Low Temperature Circuit Coolant Pump -V468-

Coolant Hose Overview



- 1 - Coolant Hose
- 2 - Coolant Pipe
- 3 - Bolt
 - 8 Nm
- 4 - Coolant Hose
- 5 - Coolant Hose
- 6 - Coolant Line
- 7 - Coolant Hose
- 8 - Coolant Hose

Radiator and Coolant Fan Overview



- 1 - Cooler
- 2 - Bolt
 - 8 Nm
- 3 - Radiator Mount
- 4 - Coolant Hose
- 5 - Rubber Bushing
- 6 - Radiator
- 7 - Bolt
 - 5 Nm
- 8 - Coolant Hose
- 9 - Fan Shroud
- 10 - Bolt
 - 5 Nm
- 11 - Low Temperature Circuit Coolant Pump -V468-
- 12 - Coolant Pipes
- 13 - Charge Air Cooler

14 - Rubber Bushing

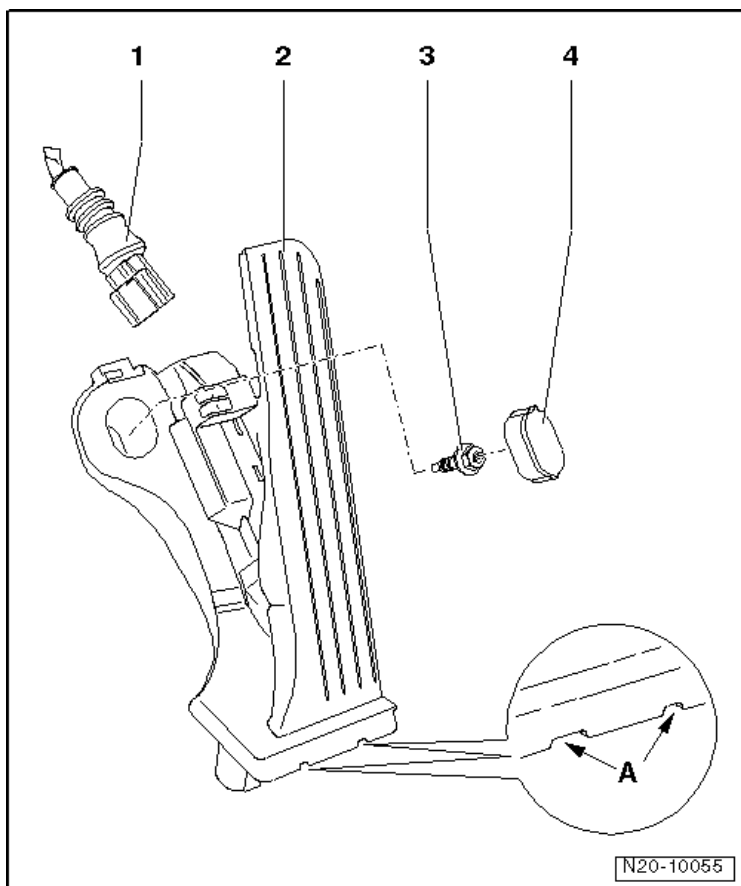
15 - Bolt

5 Nm

16 - Radiator Mount

Fuel Supply – 1.4L CNLA

Accelerator Pedal Mechanism Overview



1 - Connector

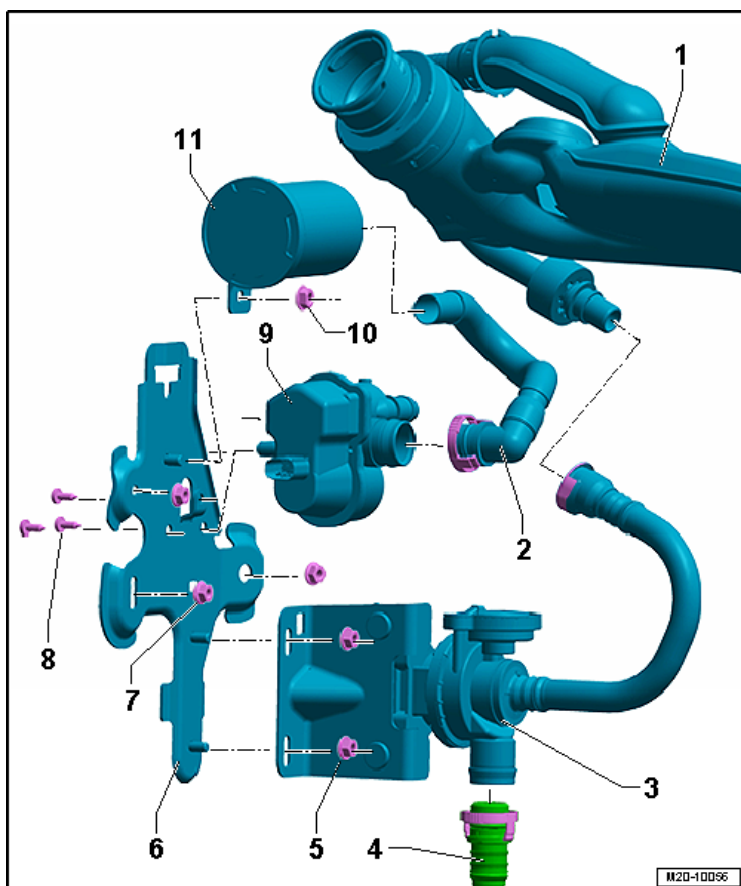
2 - Accelerator Pedal Position Sensor -G79- / Accelerator Pedal Position Sensor 2 -G185-

3 - Bolt

□ 10 Nm

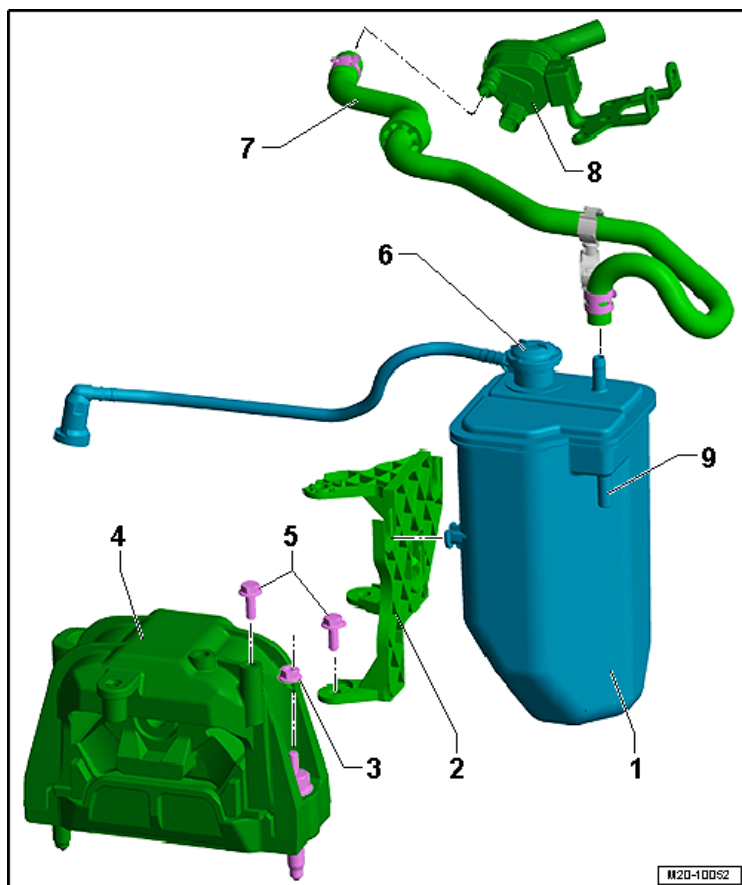
4 - Cap

Leak Detection Pump -V144- Assembly Overview



- 1 - Fuel Tank Filler Tube
- 2 - Connecting Pipe
- 3 - Valve
- 4 - Connecting Pipe
- 5 - Nut
 - 6 Nm
- 6 - Bracket
- 7 - Nut
 - 6 Nm
- 8 - Bolt
 - 3 Nm
- 9 - Leak Detection Pump -V144-
- 10 - Nut
 - 2 Nm
- 11 - Air Filter

Canister Installed in Engine Compartment Overview



1 - EVAP Canister

2 - Bracket

3 - Nut

□ 10 Nm

4 - Engine Mount

5 - Bolts

□ 10 Nm

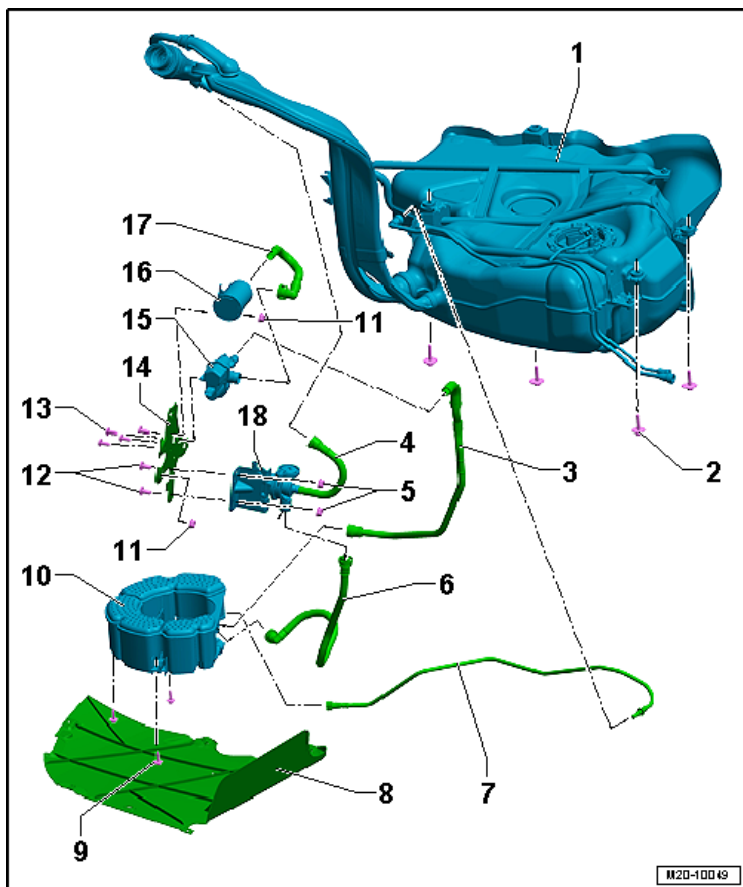
6 - Connecting Line

7 - Connecting Line

8 - EVAP Canister Purge Regulator Valve 1 -N80-

9 - Vent Hole

EVAP Canister Installed on Right Rear Side Overview



1 - Fuel Tank

2 - Bolts

See Fuel Tank Overview

3 - Vent Line

4 - Connecting Line

5 - Nuts

See Leak Detection Pump -V144- Assembly Overview

6 - Connecting Line

7 - Vent Line

8 - Underbody Cover

9 - Bolts

8 Nm

10 - EVAP Canister

11 - Nut

See Leak Detection Pump -V144- Assembly Overview

12 - Threaded Stud

13 - Bolt

See Leak Detection Pump -V144- Assembly Overview

14 - Bracket

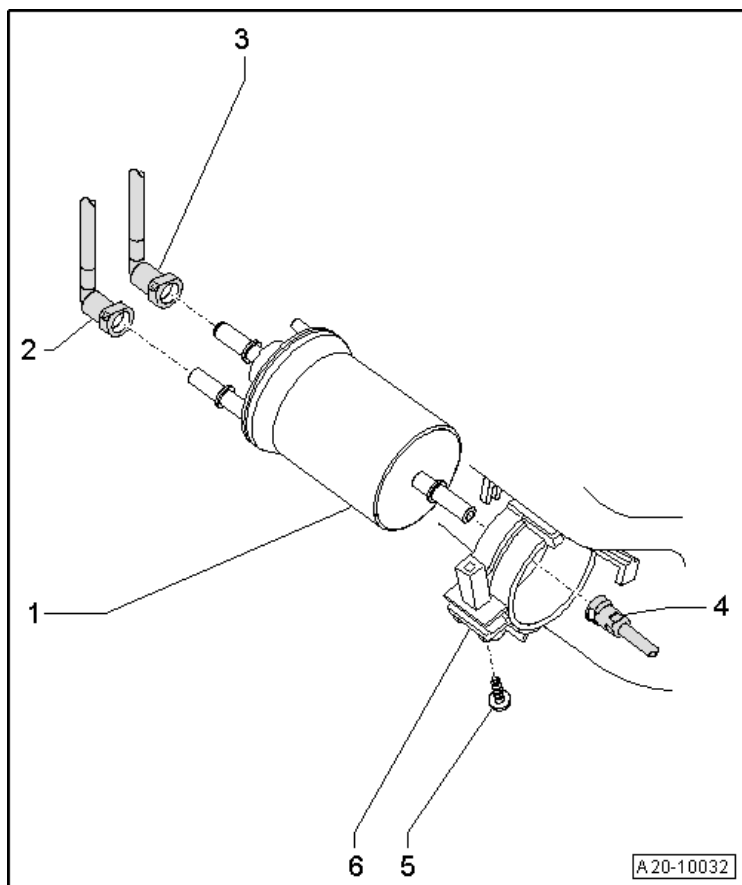
15 - Leak Detection Pump -V144-

16 - Air Filter

17 - Connecting Line

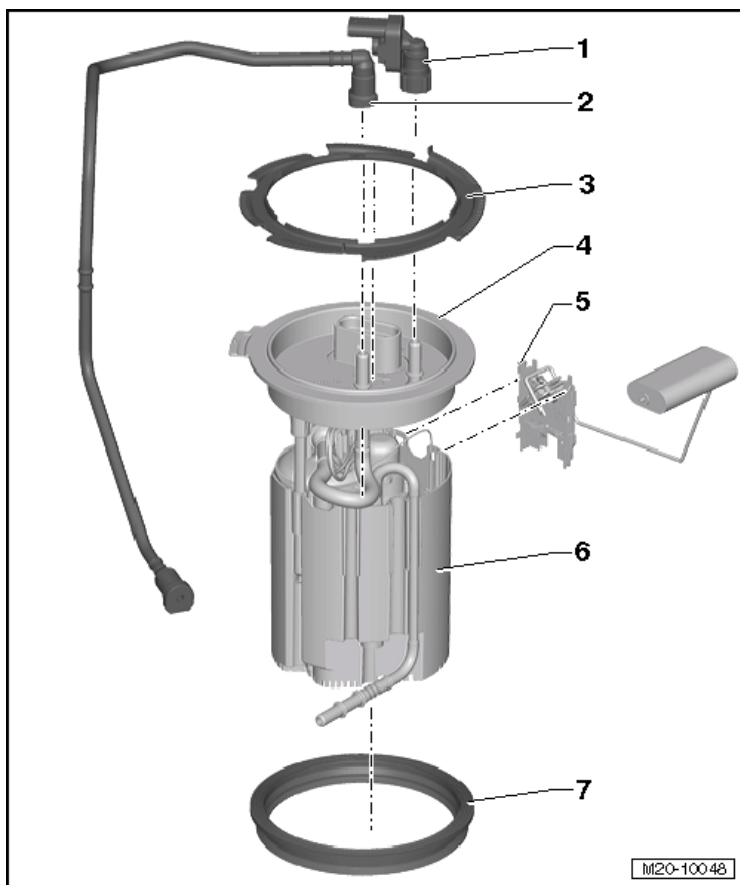
18 - Valve

Externally Installed Fuel Filter Overview



- 1 - Fuel Filter
- 2 - Fuel Supply Line
- 3 - Fuel Return Line
- 4 - Fuel Line
- 5 - Bolt
 - 3 Nm
- 6 - Bracket for Fuel Filter

Fuel Delivery Unit/Fuel Level Sensor Overview



1 - EVAP Canister System Pressure Sensor -G804-

2 - Supply Line

3 - Locking Ring

110 Nm

4 - Flange

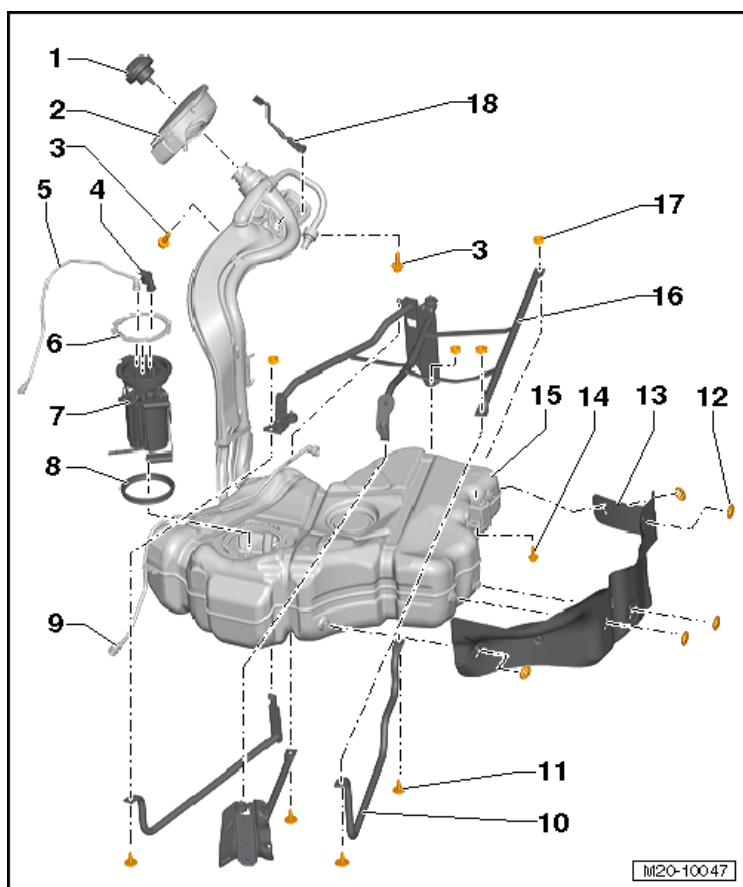
5 - Fuel Level Sensor -G-

6 - Fuel Delivery Unit

7 - Seal

Replace after removing

Fuel Tank Overview



1 - Cap

2 - Fuel Filler Door Unit

3 - Bolt

10 Nm

4 - EVAP Canister System Pressure Sensor -G804-

5 - Supply Line

6 - Locking Ring

110 Nm

7 - Fuel Delivery Unit

8 - Seal

Always replace

9 - Vent Line

10 - Mounting Strap

11 - Bolt

23 Nm

12 - Lock Washer

13 - Heat Shield

14 - Bolt

- 23 Nm
- Always replace

15 - Fuel Tank

16 - Mounting Strap

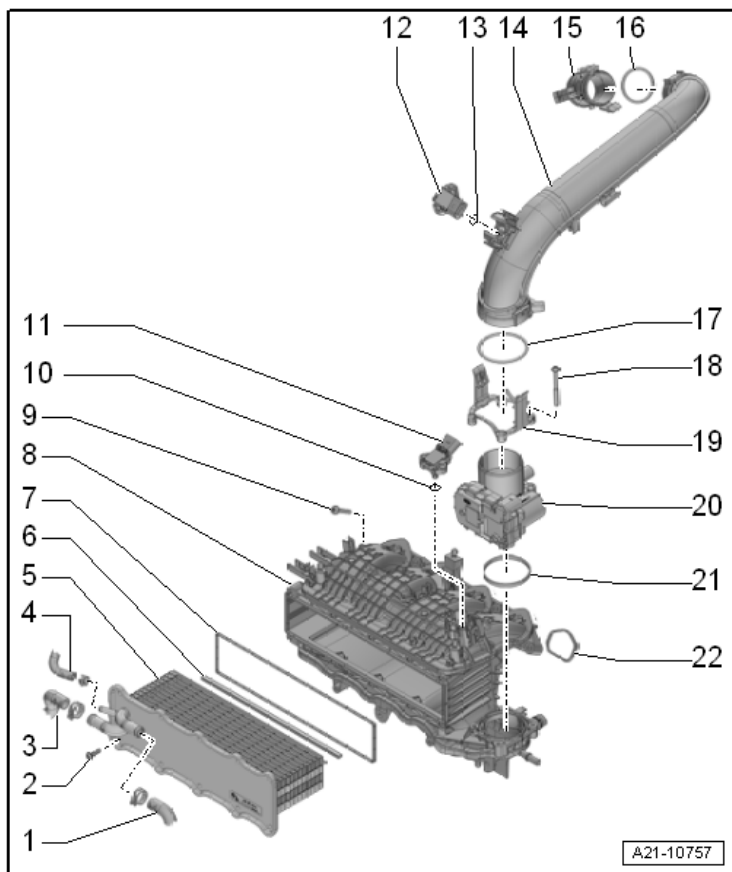
17 - Nut

- 23 Nm
- Always replace

18 - Ground Connection

Turbocharger – 1.4L CNLA

Charge Air System Overview



1 - Coolant Hose

2 - Bolt

15 Nm

3 - Coolant Hose

4 - Coolant Hose

5 - Charge Air Cooler

6 - Sealing Lip

7 - Seal

8 - Intake Manifold

9 - Bolt

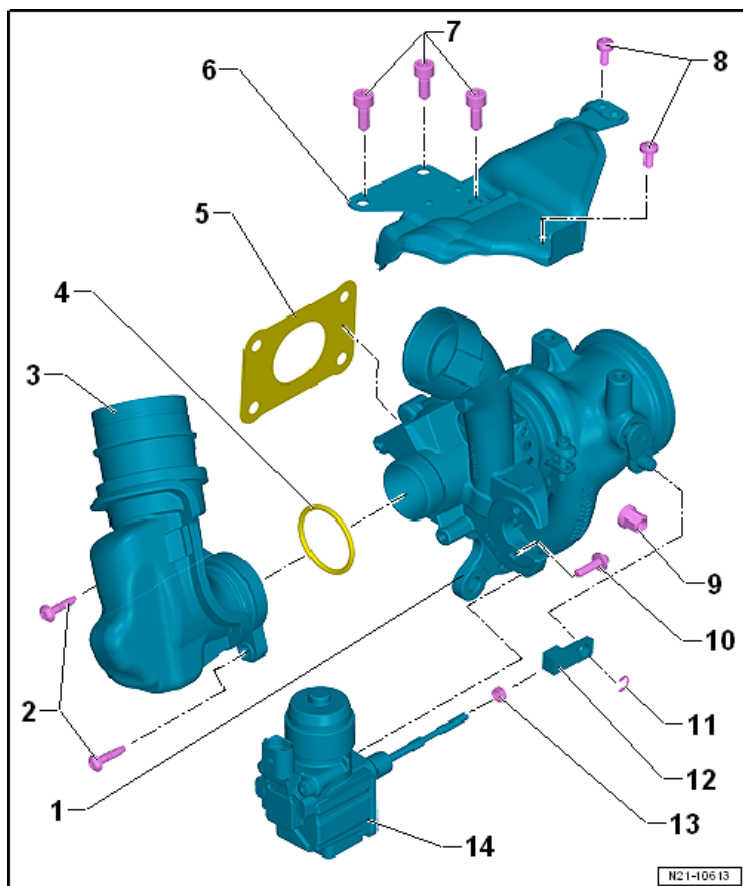
Tightening specification and sequence, see Intake Manifold Overview

10 - O-ring

Replace after removing

- 11 - Intake Air Temperature Sensor -G42-/Manifold Absolute Pressure Sensor -G71-**
- 12 - Charge Air Pressure Sensor -G31-/Intake Air Temperature Sensor 2 -G299-**
- 13 - O-ring**
 - Replace after removing
- 14 - Air Guide Pipe**
- 15 - Connection**
- 16 - O-ring**
 - Replace after removing
- 17 - O-ring**
 - Replace after removing
- 18 - Bolt**
 - 7 Nm
- 19 - Clamp**
- 20 - Throttle Valve Control Module -J338-**
- 21 - Seal**
- 22 - Seal**

Turbocharger and Mahle Charge Pressure Actuator -V465- Overview



- 1 - Turbocharger**
- 2 - Bolt**
 - 8 Nm
- 3 - Connection**
- 4 - O-ring**
 - Replace after removing
- 5 - Seal**
 - Replace after removing
- 6 - Heat Shield**
- 7 - Bolt**
 - 25 Nm
- 8 - Bolt**
 - 8 Nm

9 - Nut

- 14 Nm
- Replace after removing

10 - Bolt

- 9 Nm
- Replace after removing

11 - Clip

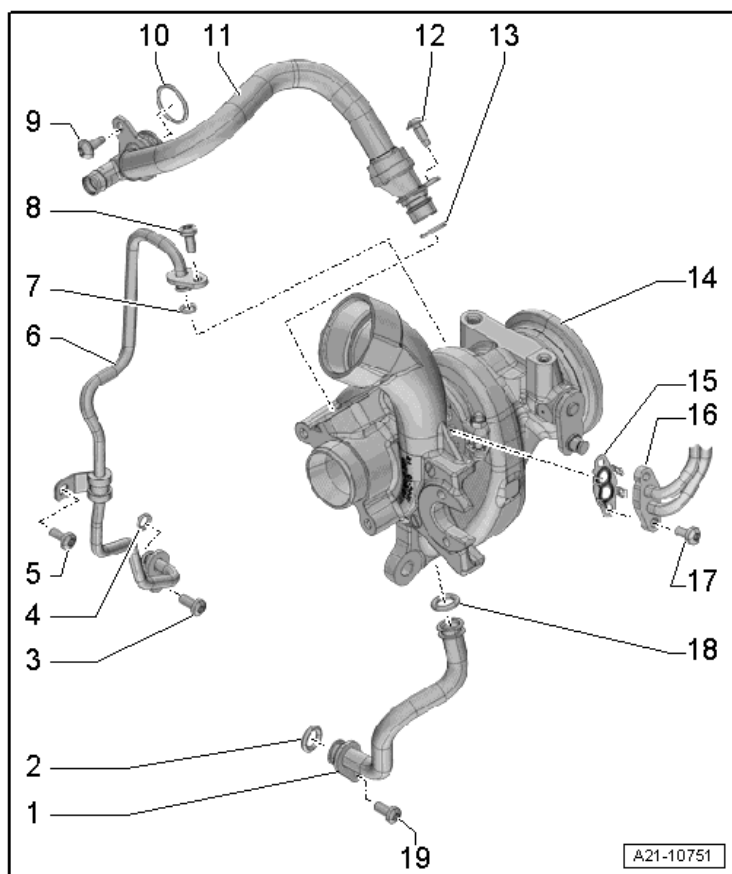
12 - Actuator Lever

13 - Lock Nut

- 10 Nm
- Secure with sealing wax

15 - Charge Pressure Actuator -V465-

Turbocharger and Mahle Charge Pressure Actuator -V465- Overview (cont'd)



- 1 - Oil Return Line**
- 2 - O-ring**
 Replace after removing
- 3 - Bolt**
 9 Nm
- 4 - O-ring**
 Replace after removing
- 5 - Oil Supply Line**
- 6 - O-ring**
 Replace after removing
- 7 - O-ring**
 Replace after removing
- 8 - Bolt**
 9 Nm

9 - Bolt

- 8 Nm
- Replace after removing

10 - O-ring

11 - Hose

12 - Bolt

- 8 Nm
- Replace after removing

13 - O-ring

14 - Turbocharger

15 - Seal

- Replace after removing

16 - Coolant Lines

17 - Bolt

- 8 Nm

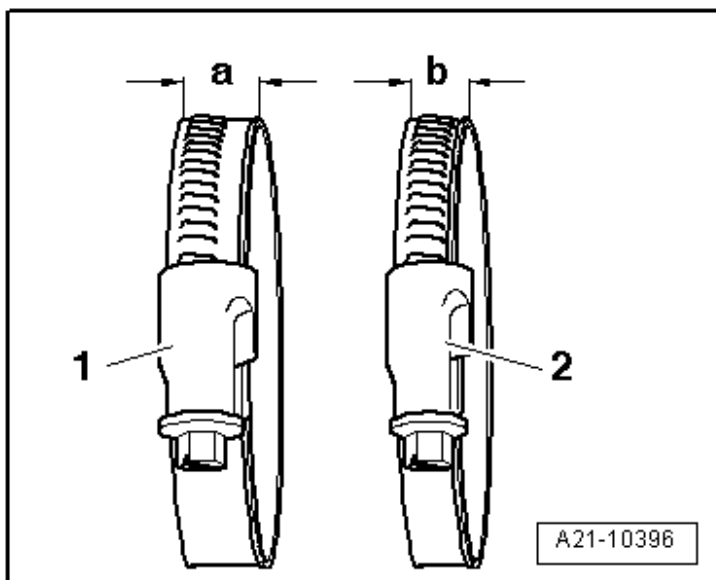
18 - O-ring

- Replace after removing

19 - Bolt

- 9 Nm

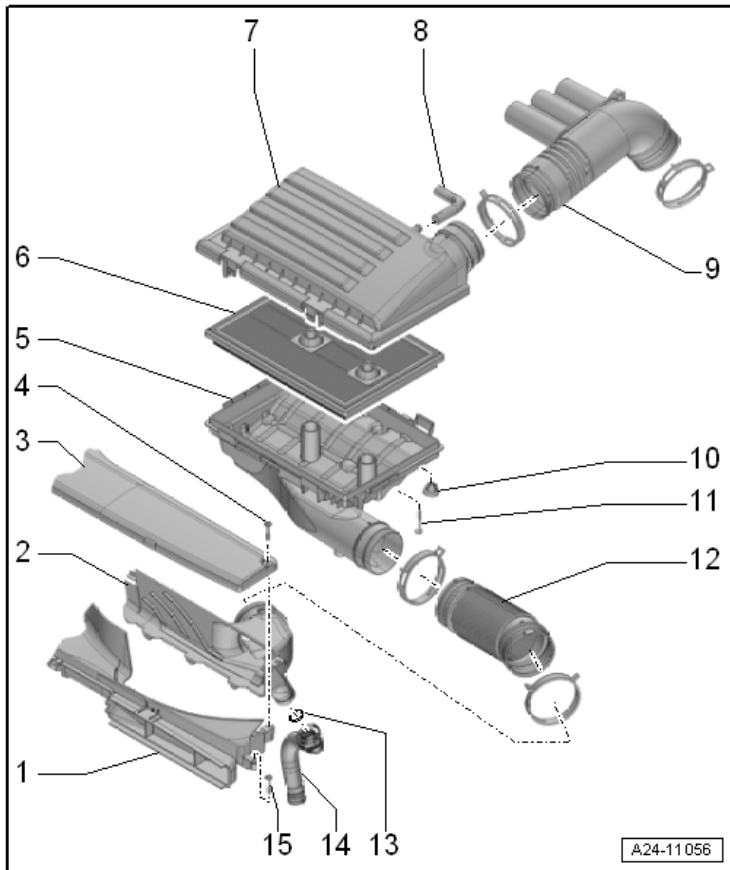
Air Guides with Screw-Type Clamps



Hose Clmap	Width	Tightening Specification
1	-a- = 13 mm wide	5.5 Nm
2	-b- = 9 mm wide	3 Nm

Multiport Fuel Injection – 1.4L CNLA

Air Filter Housing Overview



1 - Air Guide Lower Section

2 - Air Guide Upper Section

3 - Cover

4 - Bolt

2 Nm

5 - Air Filter Housing Lower Section

6 - Air Filter

7 - Air Filter Housing Upper Section

8 - Hose

9 - Air Guide Hose

10 - Rubber Buffer

11 - Guide Hose

12 - Bolt

1.5 Nm

13 - O-ring

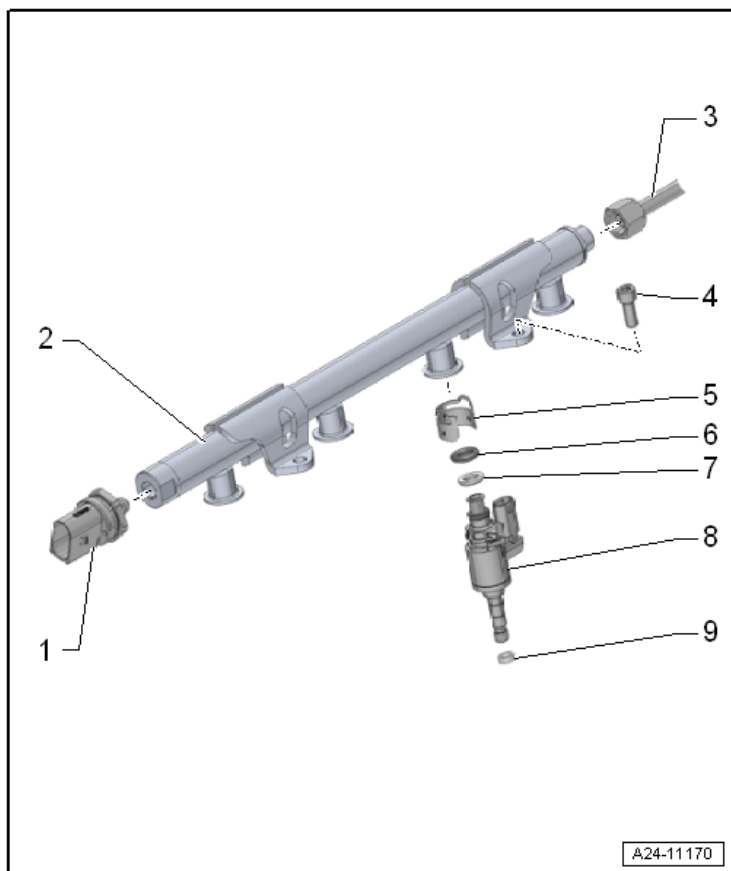
- Replace if damaged

14 - Water Drain Hose

15 - Bolt

- 2 Nm

Fuel Rail with Fuel Injectors Overview



1 - Fuel Pressure Sensor -G247-

- 22 Nm

2 - Fuel Rail

3 - High Pressure Pipe

- 25 Nm

4 - Bolt

- 9 Nm

5 - Support Ring

6 - O-ring

- Replace after removing

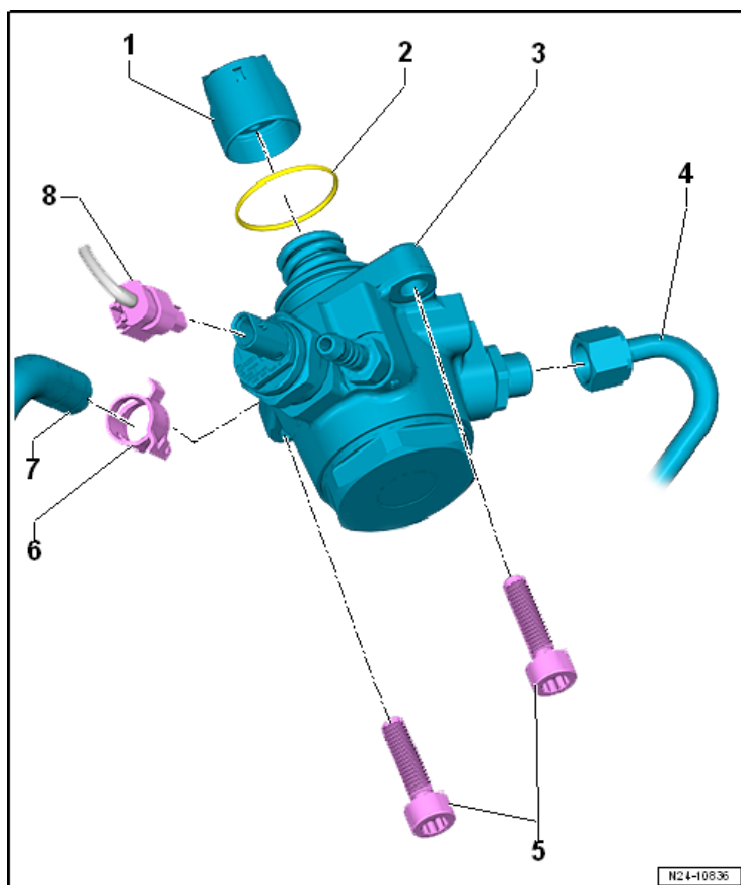
7 - Spacer Ring

- Replace if damaged

8 - Fuel Injector

9 - Combustion Chamber Seal

High Pressure Pump Overview



1 - Roller Tappet

2 - O-ring

- Replace after removing

3 - High Pressure Pump

4 - High Pressure Pipe

- 25 Nm

- Coat the thread on the union nut with clean engine oil.

5 - Bolt

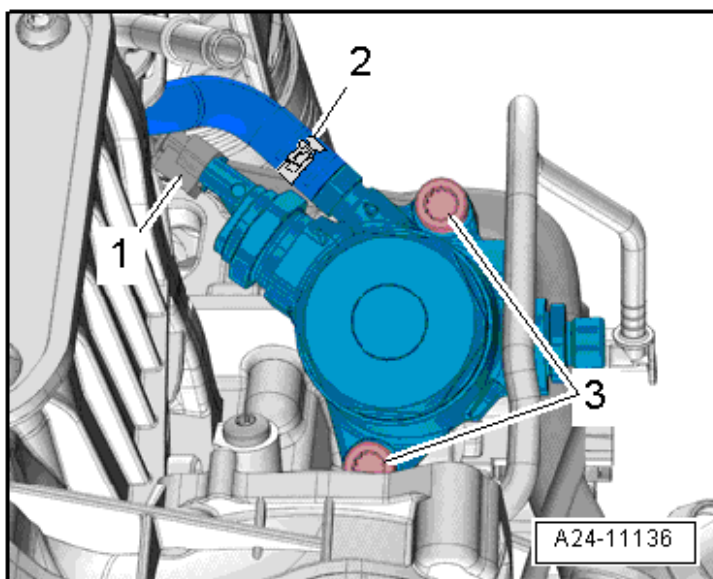
- Tightening specification and sequence, see High Pressure Pump - Tightening Specification and Sequence below

6 - Hose Clamp

7 - Fuel Supply Line

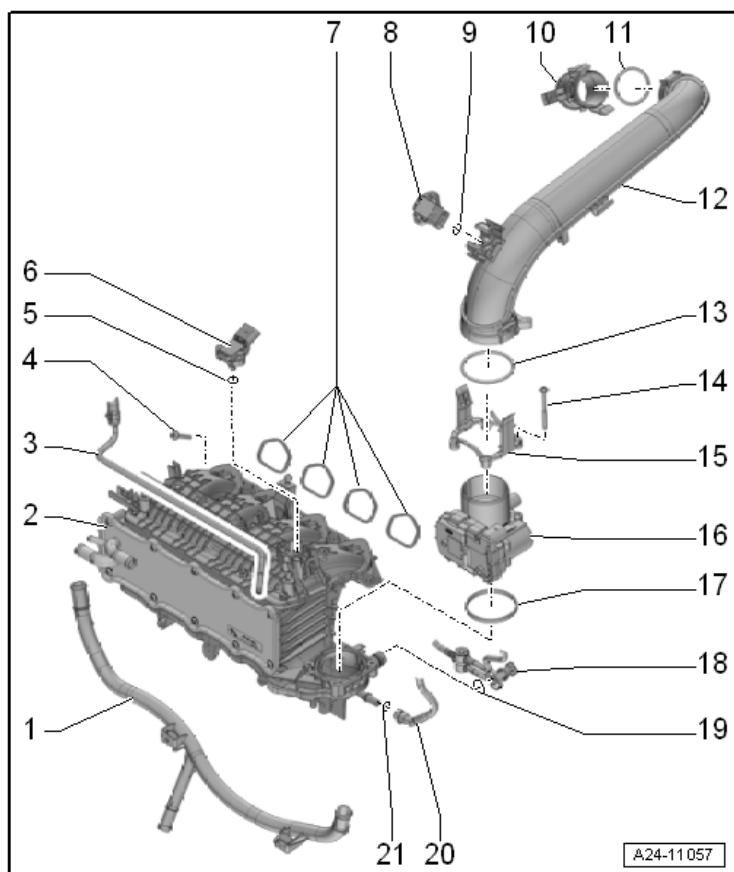
8 - Connector

High Pressure Pump Tightening Specification and Sequence



Stage	Bolts	Tightening specification
1	3	Install all the way in by hand.
2	3	Tighten 1 turn from side to side until the flange on the high pressure pump touches the camshaft housing
3	3	20 Nm
4	3	Tighten 90° additional turn

Intake Manifold Overview



1 - Connector

2 - Intake Manifold

3 - Coolant Pipe

4 - Bolt

- Tightening specification and sequence, see Intake Manifold - Tightening Specification and Sequence below

5 - O-ring

- Replace after removing

6 - Intake Air Temperature Sensor -G42-/Manifold Absolute Pressure Sensor -G71-

7 - Gaskets

- Replace after removing

8 - Charge Air Pressure Sensor -G31-/Intake Air Temperature Sensor 2 -G299-

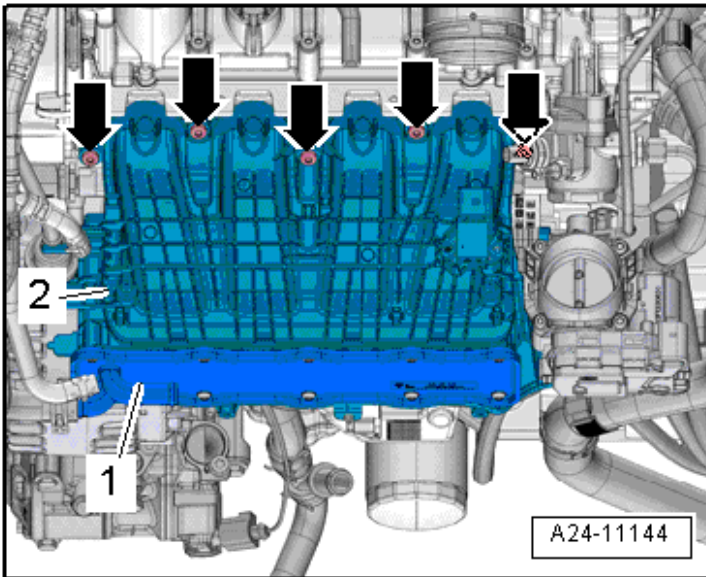
9 - O-ring

- Replace after removing

10 - Connection

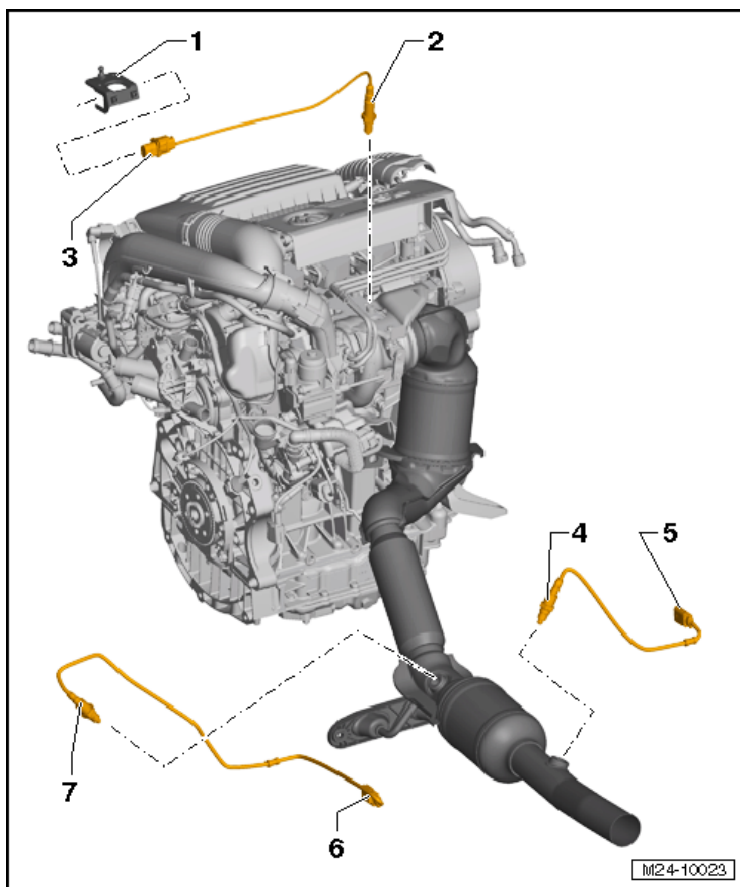
- 11 - O-ring
 - Replace after removing
- 12 - Air Guide Pipe
- 13 - O-ring
 - Replace after removing
- 14 - Bolt
 - 7 Nm
- 15 - Clamp
- 16 - Throttle Valve Control Module -J338-
- 17 - Seal
 - Replace after removing
- 18 - Vacuum Line
- 19 - O-ring
 - Replace after removing
- 20 - Vacuum Line
- 21 - O-ring
 - Replace after removing

Intake Manifold Tightening Specifications



Stage	Bolts	Tightening specification
1	Arrows	Starting in the center and alternating from side to side, install by hand all the way in.
2	Arrows	Starting from the center and alternating from side to side 8 Nm.

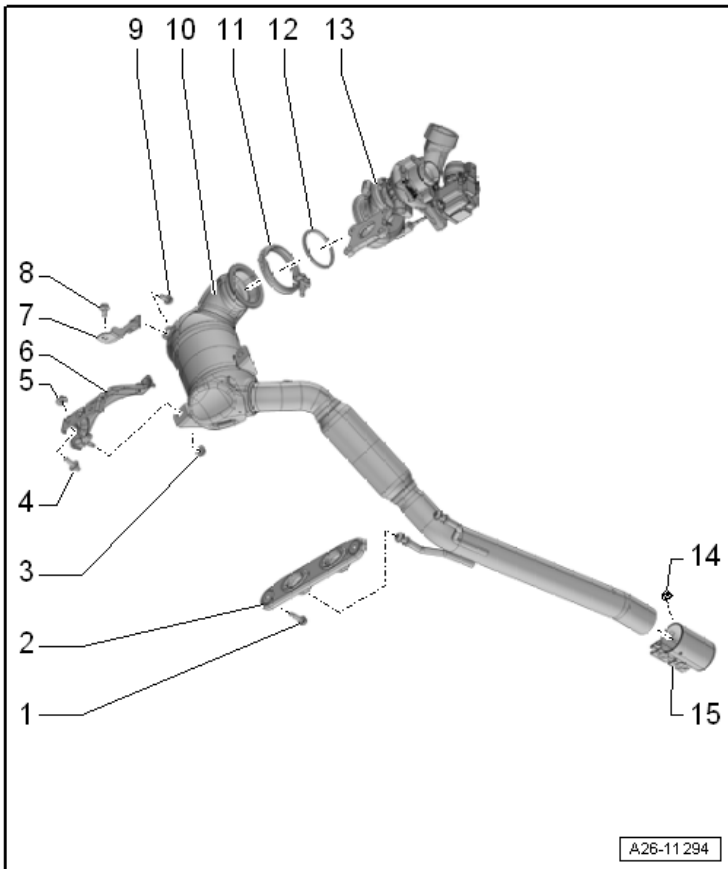
Oxygen Sensor Overview



- 1 - Bracket
- 2 - Heated Oxygen Sensor -G39- with Oxygen Sensor Heater -Z19-
 - 55 Nm
- 3 - Connector
- 4 - Oxygen Sensor After Three Way Catalytic Converter -G130- with Heater For Oxygen Sensor 1 After Catalytic Converter -Z29-
 - 55 Nm
- 5 - Connector
- 6 - Connector
- 7 - Oxygen Sensor 2 -G108- with Oxygen Sensor 2 Heater -Z28-
 - 55 Nm

Exhaust System, Emission Controls – 1.4L CNLA

Emissions Control Overview



1 - Bolt

2 - Bracket

3 - Nut

- Tightening specification and sequence, see Installing the Catalytic Converter - Tightening Specification and Sequence below

4 - Bolt

- 20 Nm

5 - Nut

- Tightening specification and sequence, see Installing the Catalytic Converter - Tightening Specification and Sequence below

6 - Bracket

7 - Bracket

- Not installed

8 - Bolt

- Not installed

9 - Bolt

- Not installed

10 - Front Exhaust Pipe with Catalytic Converter

11 - Screw-Type Clamp

- Tightening specification and sequence, see Installing the Catalytic Converter - Tightening Specification and Sequence below

12 - Seal

- Replace after removing

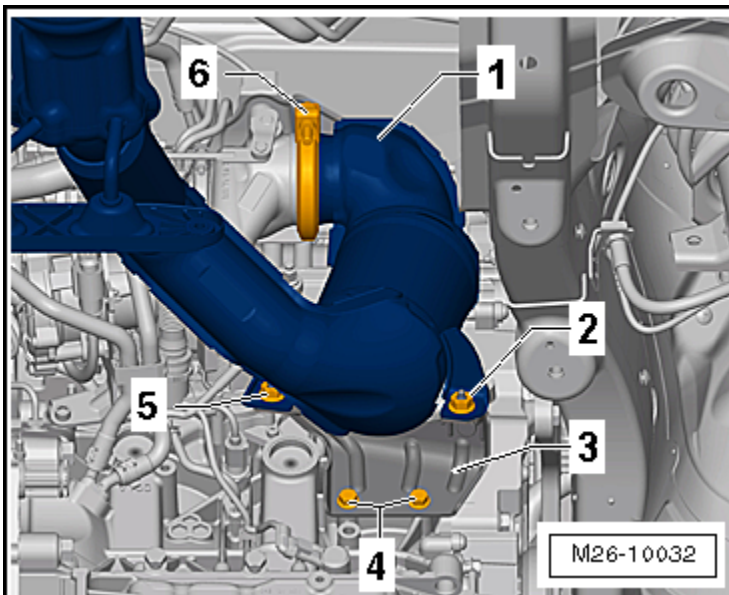
13 - Turbocharger

14 - Nut

- 30 Nm

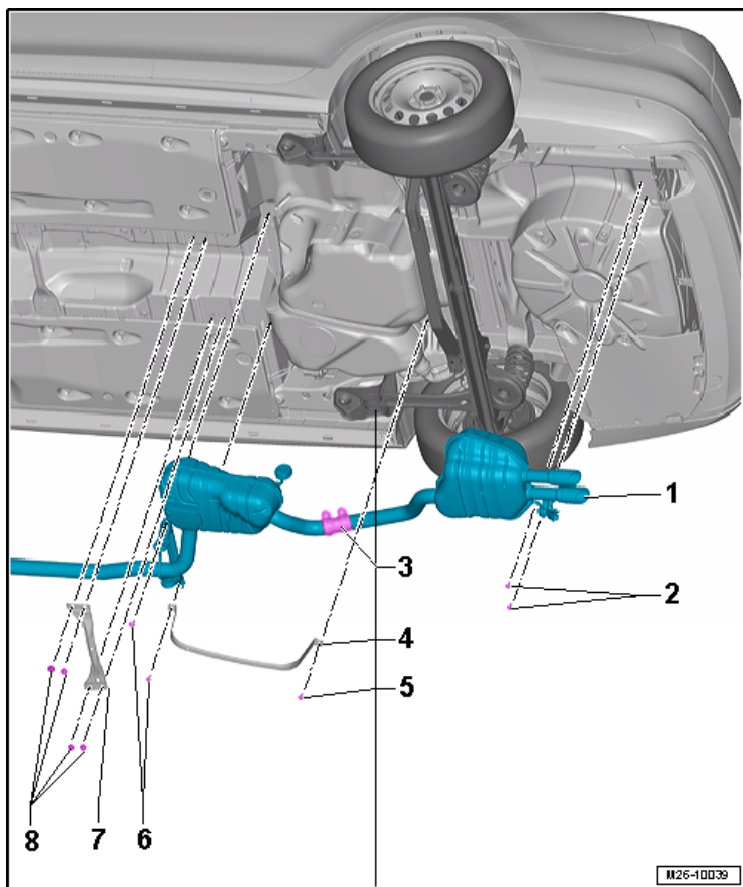
15 - Front Clamping Sleeve

Installing the Catalytic Converter - Tightening Specification and Sequence



Stage	Bolts and Nuts	Tightening specification
1	Place the catalytic converter -1- on the turbocharger and loosely attach a new v-clamp -6-.	Tighten loosely hand tight.
2	- Loosely install nuts -2, 4 and 5- by hand. • Catalytic converter -1- and bracket -3- need to be able to move.	Tighten loosely hand tight.
3	Tighten v-clamp -6-.	15 Nm
4	Tighten all bolts and nuts.	20 Nm

Muffler Overview



1 - Exhaust Pipe with Rear Muffler

2 - Bolt

- 25 Nm
- Replace after removing

3 - Separating Point

4 - Mounting Strap

5 - Bolt

- Tightening specification, refer to Fuel Supply System

6 - Bolt

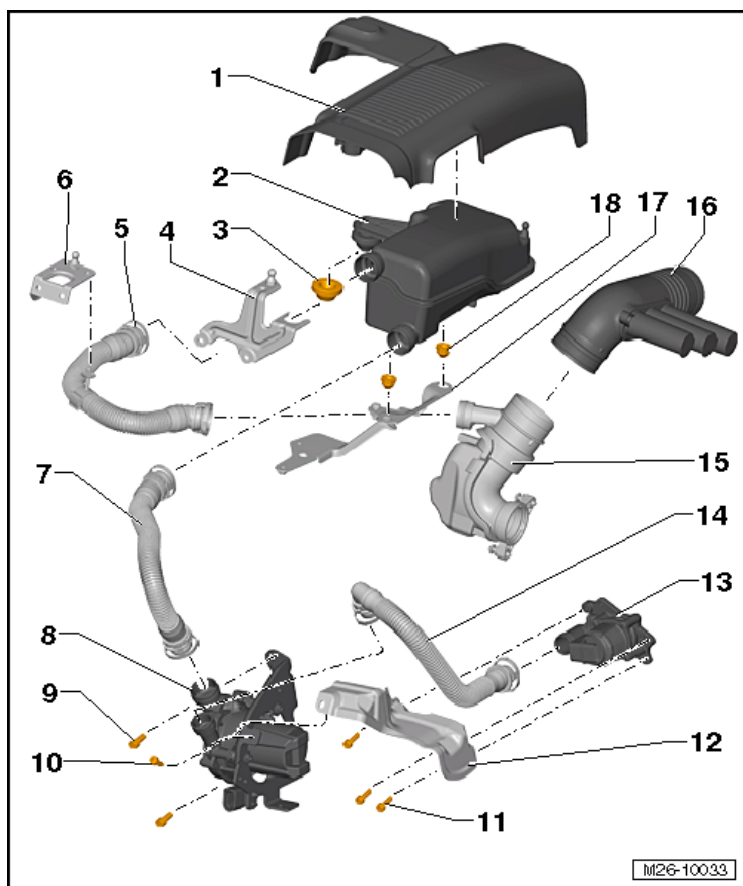
- Tightening specification, refer to Fuel Supply System

7 - Rear Tunnel Bridge

8 - Nut

- 20 Nm

Secondary Air Injection System Overview

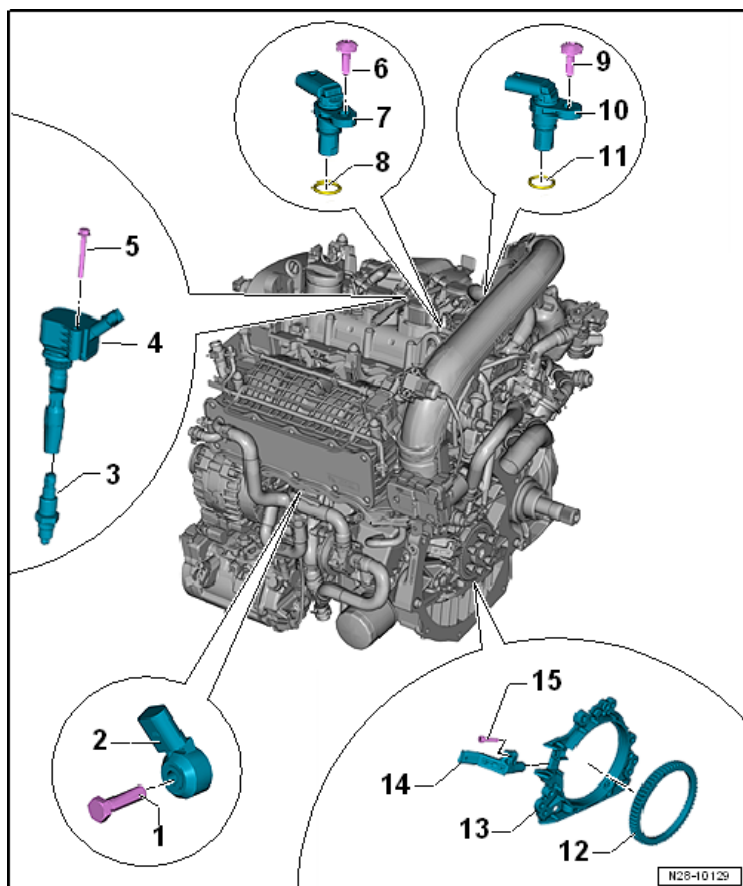


- 1 - Cover
- 2 - Damper
- 3 - Rubber Bushing
- 4 - Bracket
- 5 - Connecting Line
- 6 - Bracket
- 7 - Connecting Line
- 8 - Secondary Air Injection (AIR) Pump Motor
- 9 - Bolt
 - 10 Nm
- 10 - Bolt
 - 5 Nm
- 11 - Bolt
 - 8 Nm
- 12 - Heat Shield
- 13 - Secondary Air Injection Solenoid Valve

- 14 - Connecting Line**
- 15 - Intake Manifold**
- 16 - Connecting Pipe**

Ignition/Glow Plug System – 1.4L CNLA

Ignition System Overview



1 - Bolt

- 20 Nm

2 - Knock Sensor 1 -G61-

3 - Spark Plug

- See Maintenance Procedures in Repair Manual

4 - Ignition Coil with Power Output Stage

5 - Bolt

- 8 Nm

6 - Bolt

- 8 Nm

7 - Camshaft Position Sensor 3 -G300-

8 - O-ring

9 - Bolt

- 8 Nm

10 - Camshaft Position Sensor -G40-

- 11 - O-ring
- 12 - Sensor Wheel
- 13 - Sealing Flange, Transmission Side
- 14 - Engine Speed Sensor -G28-
- 15 - Bolt
 - 4.5 Nm

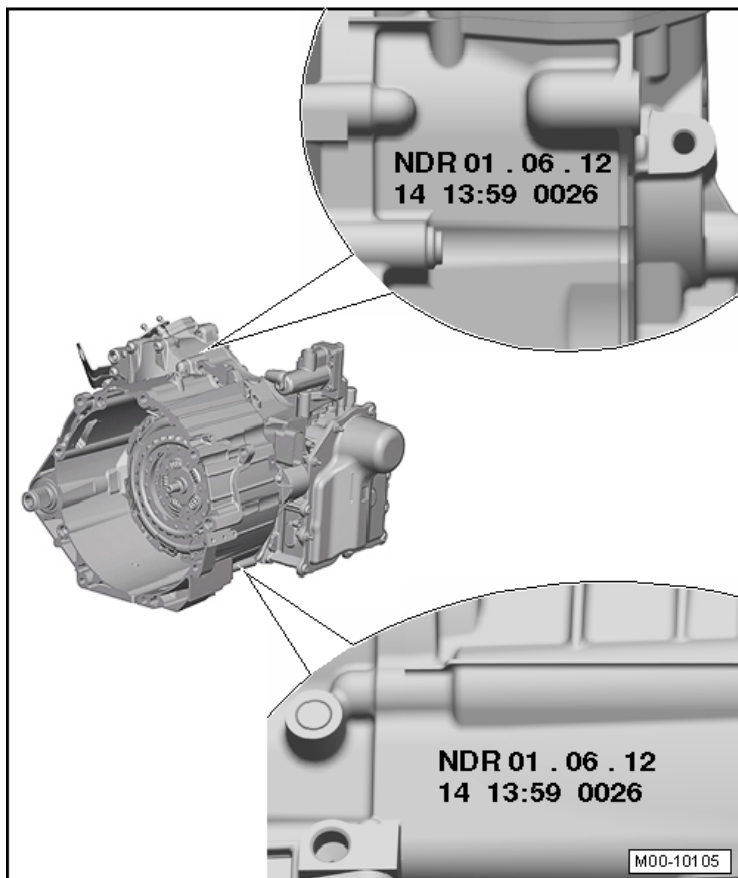
Technical Data

Engine data	1.4L TFSI engine
Idle speed Idle speed cannot be adjusted, it is regulated by idle stabilization	640 to 800 RPM
RPM limited by switching off fuel injectors and closing throttle valve	Approximately 6500 RPM
Ignition timing is regulated by control module. It is not possible to adjust the ignition timing.	
Ignition System	Single coil ignition system with 4 ignition coils (output stages integrated) that are connected directly to spark plugs via the ignition cables.
Ignition sequence	1-3-4-2

DIRECT SHIFT GEARBOX (DSG) TRANSMISSION – 0CG

General Information

Transmission Code Letters, Reading



Transmission code letters and build date.

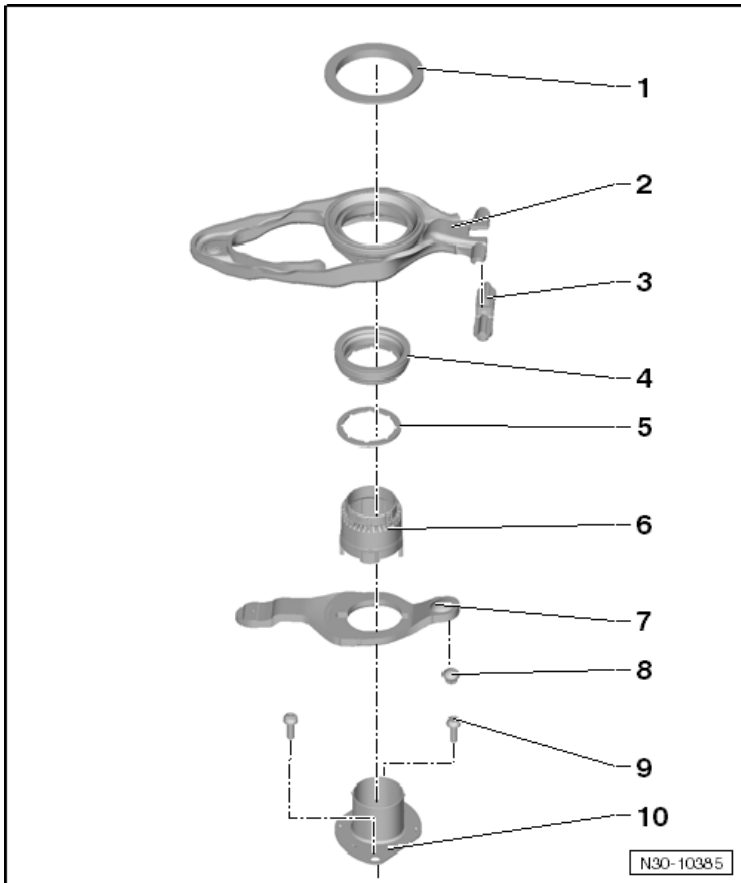
Example:	NDR	01	06	12
	Identification code	Day	Month	Year (2012) of manufacture
	Plant Code	Time		Serial Number
	14	13:59		0026

Transmission Allocation Codes

Direct Shift Gearbox (DSG) 0CG		
Transmission	Code letters	NDR
Allocation	Type	Jetta from MY 11
	Engine	1.4L TSI - 110 kW
Gear Ratios	Final drive I for 1st to 4th gear	71 : 16 = 4.438
Ratio: $Z_2 : Z_1$	Final drive II for 5th gear and 6th gear	71 : 22 = 3.227
Ratio: $Z_2 : Z_1$	Final drive III for 7th gear and reverse gear	71 : 17 = 4.176
Use the transmission code when ordering replacement parts for a repair. Refer to the Parts Catalog.		

Clutch (DSG) – 0CG

Clutch Engaging Mechanism Overview



1 - Shim for "K 1"

2 - Large Engaging Lever "K 1"

3 - Engaging Lever Support

4 - Small Engaging Bearing for "K 2"

5 - Shim for "K 2"

6 - Guide Sleeve Upper Section

7 - Small Engaging Lever for "K 2"

8 - Ball Stud

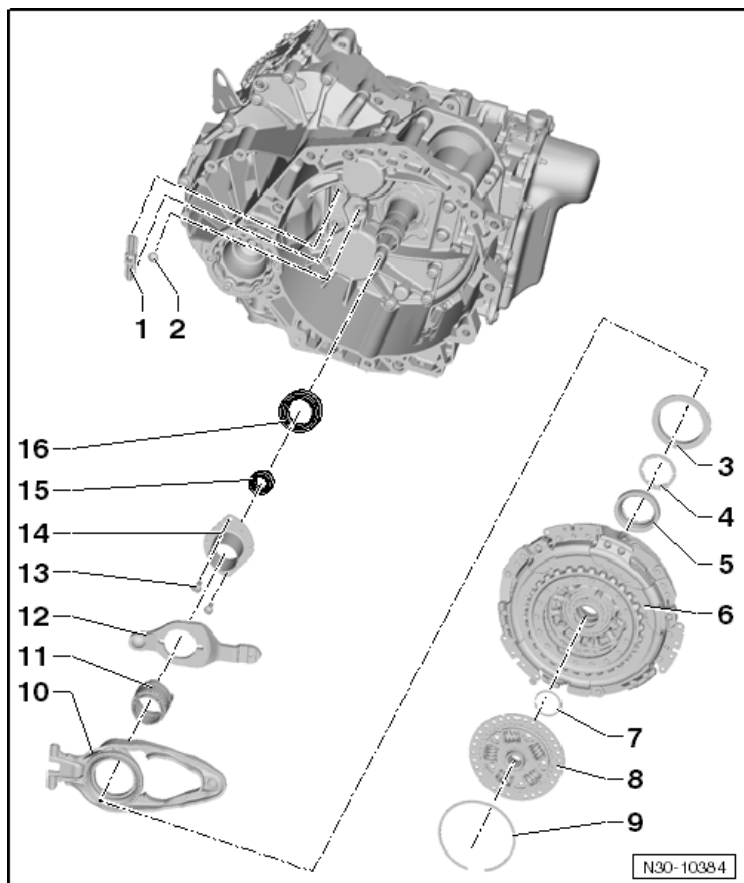
9 - Bolt

8 Nm + 90° turn

Replace after removing

10 - Guide Sleeve Lower Section

Dual Clutch Overview



- 1 - Engaging Lever Support
- 2 - Ball Stud
- 3 - Shim "SK 1"
- 4 - Shim "SK 2"
- 5 - Small Engaging Bearing for "K 2"
- 6 - Dual Clutch
- 7 - Locking Ring
 - Replace after removing
- 8 - Hub
- 9 - Locking Ring
 - Replace after removing
- 10 - Large Engaging Lever "K 1"
- 11 - Guide Sleeve Upper Section
- 12 - Small Engaging Lever for "K 2"

13 - Bolts

- 8 Nm + 90° turn
- Replace after removing

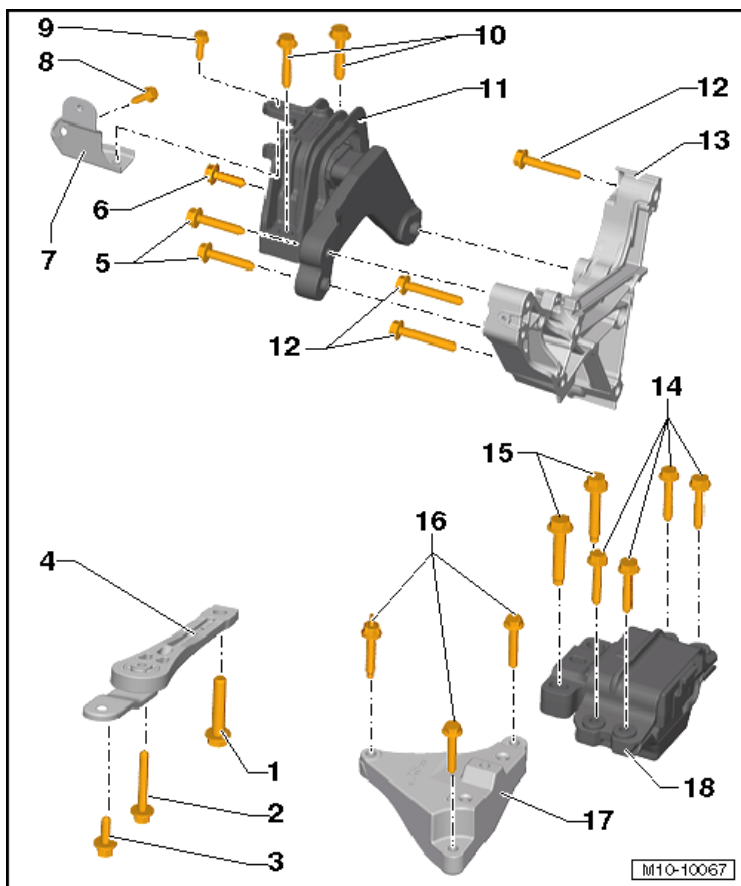
14 - Guide Sleeve Lower Section

15 - Seal

16 - Seal

Controls, Housing (DSG) – 0CG

Assembly Mounts Overview



1 - Bolt

- Tightening specification, see Engine and Transmission Mount Overview
- Always replace

2 - Bolt

- Tightening specification, see Engine and Transmission Mount Overview
- Always replace

3 - Bolt

- Tightening specification, see Engine and Transmission Mount Overview
- Always replace

4 - Pendulum Support

5 - Bolt

- 40 Nm + 90° turn
- Replace after removing

6 - Bolt

- 40 Nm + 90° turn
- Replace after removing

7 - Bracket

8 - Bolt

- 20 Nm + 90° turn
- Replace after removing

9 - Bolt

- 20 Nm + 90° turn
- Replace after removing

10 - Bolt

- 40 Nm + 90° turn
- Replace after removing

11 - Engine Mount

12 - Bolt

- Tightening specification, see Engine and Transmission Mount Overview

13 - Engine Support

14 - Bolt

- Tightening specification, see Engine and Transmission Mount Overvie

15 - Bolt

- 60 Nm + 90° turn
- Replace after removing

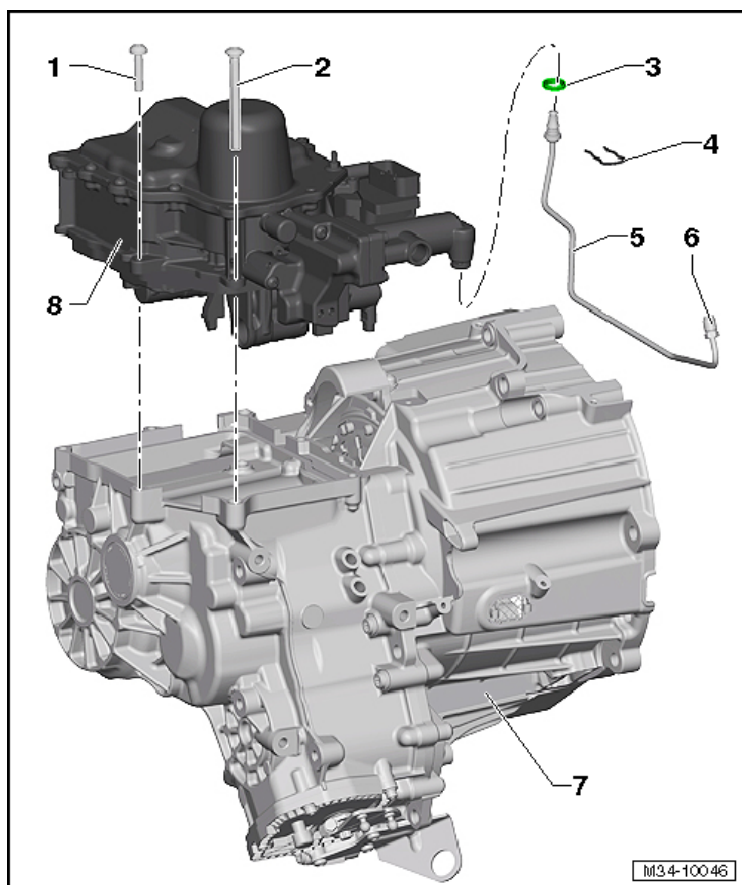
16 - Bolt

- 40 Nm + 90° turn
- Replace after removing

17 - Transmission Bracket

18 - Transmission Mount

Mechatronic Overview



1 - Bolt

- Tightening specification and sequence, see DSG Transmission Mechatronic -J743- - Tightening Specification and Sequence below
- M8 x 35

2 - Bolt

- Tightening specification and sequence, see DSG Transmission Mechatronic -J743- - Tightening Specification and Sequence below
- M8 x 90

3 - O-ring

- Replace if damaged

4 - Clamp

5 - Hydraulic Line

6 - Bolt

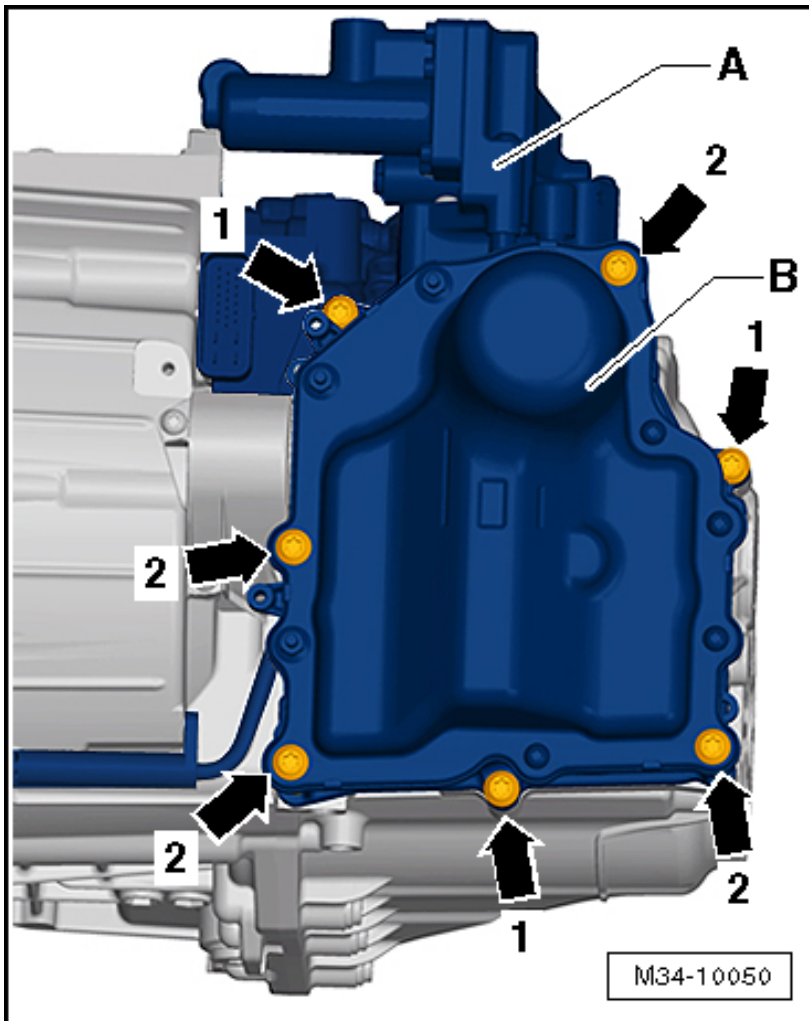
- 18 Nm

7 - Transmission

8 - DSG Transmission Mechatronic -J743-

Direct Shift Gearbox (DSG) Mechatronic -J743- Tightening Specification and Sequence

DSG Trans. -
0CG



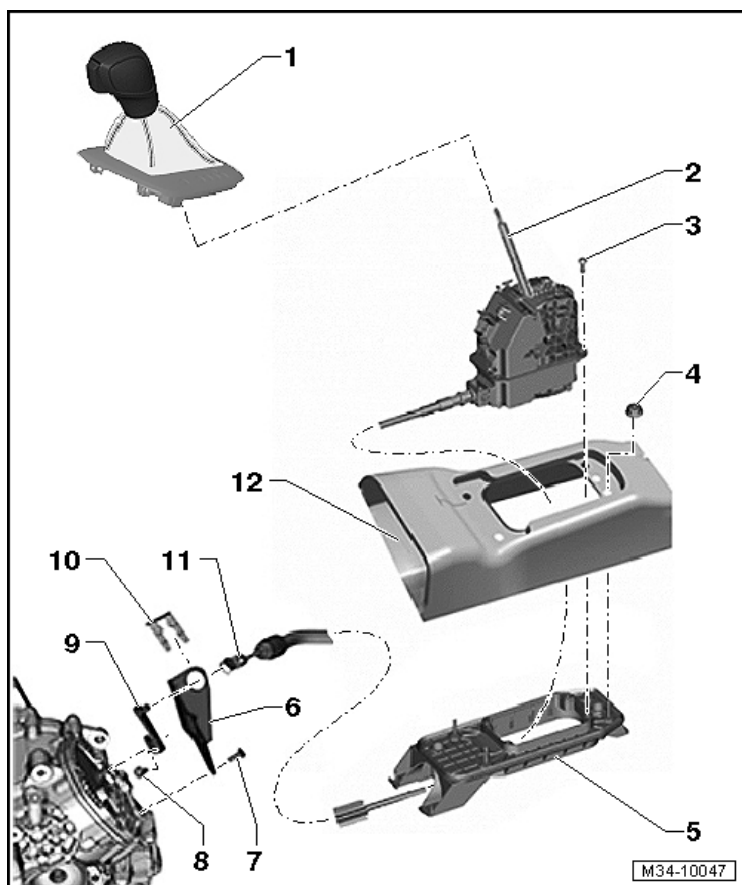
Replace the bolts -arrows 1- and -arrows 2-.

Stage	Bolts	Tightening specification
1	-Arrows 1-	Tighten the bolt hand-tight.
2	Remove the guide pin -T10406-	
3	-Arrows 2-	Tighten the bolt hand-tight.
4	-Arrows 1 and 2-	10 Nm diagonally

Cover of engaging levers on the clutch mechanism (not illustrated)

- 8 Nm

Selector Mechanism Overview



1 - Selector Lever Handle

2 - Selector Mechanism with Selector Lever Cable

3 - Bolt

4 Nm

4 - Nut

8 Nm

5 - Selector Housing

6 - Cable Mounting Bracket

7 - Bolt

8 Nm + 90° turn

Replace after removing

8 - Bolt

8 Nm + 90° turn

Replace after removing

9 - Selector Lever

10 - Lock Washer

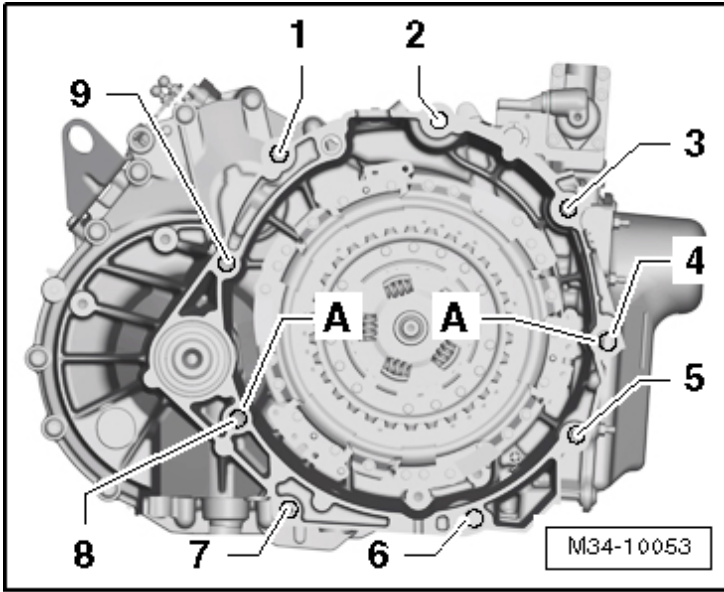
Replace

11 - Bolt

□ 13 Nm

12 - Tunnel/Body

Transmission Tightening Specifications



Item	Bolt	Nm
1, 2	M12 x 50	80
3, 4	M12 x 105	80
5, 6, 7	M10 x 50	40
8, 9 ¹⁾	M12 x 70	80
A	Alignment sleeve for centering	

¹⁾ Attach from the engine side.

Gears, Shafts (DSG) – 0CG

Fastener Tightening Specifications

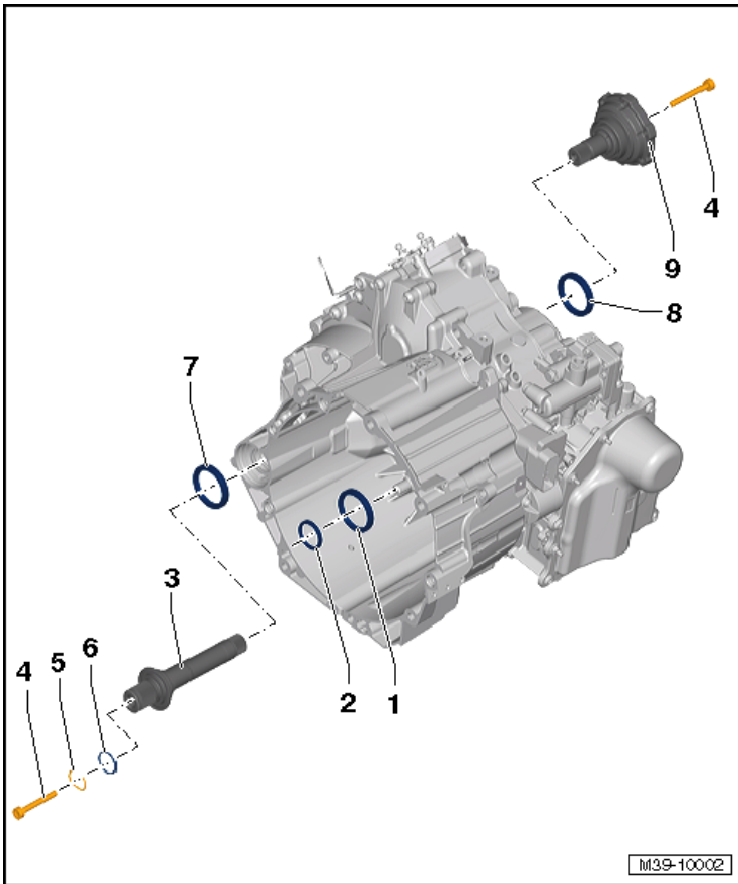
Component	Nm
Parking lock cover to transmission housing bolts	8
Parking lock to the transmission housing bolts ¹⁾	20 + 90°
Transmission selector lever to selector shaft bolt	15

¹⁾ Replace the bolts after removing them.

Rear Final Drive, Differential (DSG) – 0CG

Seals Component Overview

DSG Trans. –
0CG



- 1 - Input shaft seal, replacing
- 2 - Inner Input Shaft Seal
- 3 - Right Stub Shaft
- 4 - Bolt
 - 30 Nm
- 5 - Locking Ring
 - Replace
- 6 - Cable Mounting Bracket
- 7 - Right Seal
- 8 - Left Seal
- 9 - Left Flange Shaft