

2014 Volkswagen Beetle/Beetle Convertible 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.

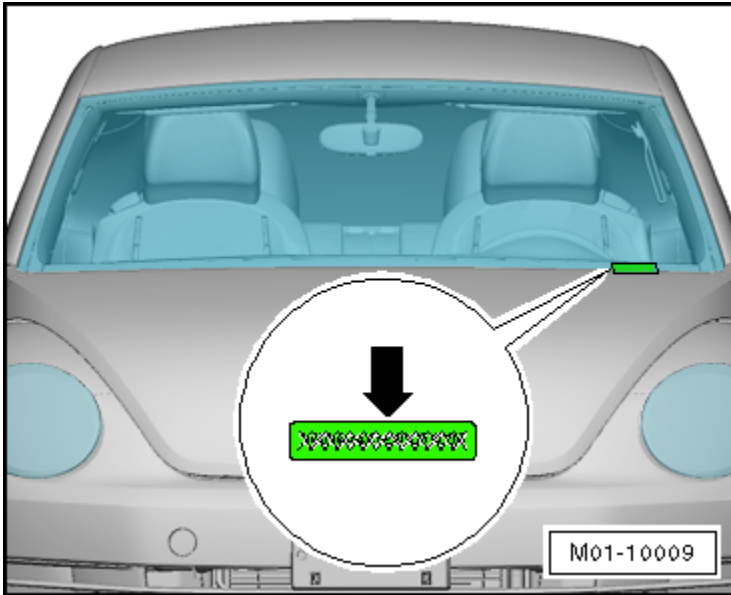
(CAUTIONS cont'd on next page)

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

Vehicle Identification Number (VIN) Location



Vehicle
Identification

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

VIN Decoder

2014 Volkswagen VIN Decoder (except Routan)

Series:

A* CC Sport w/Man Trans, Passat S, Tiguan w/Auto Trans

B* CC Sport/Sport w/Auto Trans, EOS Komfort/Sport w/Auto Trans, Jetta SE w/Spd Man, Passat SE Tiguan w/Auto Trans and 4 Motion

C* Golf 4dr w/Spd Manual, Passat SEL, Tiguan w/Man Trans

D* Golf 4dr w/Auto Trans, Jetta SE w/Auto Trans, Touareg V6 FSI/TDI R-Line

E* Touareg V6 FSI/TDI Hybrid

F* Beetle w/Spd Auto Trans, EOS Lux/Exec w/Auto Trans

G* CC V6 Exec w/Auto Trans and 4Motion, GTI 4dr w/Man Trans, Jetta SEL w/Spd Man Trans

H* Beetle 1.8T w/Spd Man Trans, CC V6 Exec w/Auto Trans, Beetle 2.5L w/Spd Manual, GTI 4dr w/Auto Trans

J* Beetle 1.8T w/Spd Auto Trans, Beetle 2.5L TDI w/Spd Auto Trans

K* Jetta SportWagen w/Spd Man Trans

L* Jetta SEL/TDI w/Auto Trans

M* Jetta SportWagen w/Spd Manual

N* Golf 4dr w/Spd Manual

P* Jetta SportWagen w/Spd Auto Trans

R* Beetle TDI w/Spd Man, CC Exec w/Auto Trans

S* Jetta R-Line w/Spd Auto Trans

1* Jetta / S w/Spd Manual

2* Jetta / S w/Auto Trans

3* Jetta TDI w/Spd Man

4* Beetle R-Line w/Spd Manual, Jetta GLI w/Auto Trans

5* Beetle Conv. 1.8T w/Spd Auto Trans, Beetle Conv. 2.5L TDI w/Spd Auto Trans, Jetta GLI w/Spd Manual

6* Beetle Conv. TDI w/Spd Man Trans, Jetta Hybrid w/Auto Trans

7* Beetle Conv. R-Line w/Spd Auto Trans

8* Beetle Conv. R-Line w/Spd Man Trans

2014 Volkswagen VIN Decoder (except Routan)																
Country of origin	Manufacturer	Vehicle Type	Series	Engine	Restraint system	Model (7 & 8)	Check digit	Model year	Assembly plant	Sequential production number (position 12 - 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

E = 2014

WWW = Europe - Pass. Car
 VWV = USA - Pass. Car
 3WW = Mexico - Pass. Car
 WVG = Europe - S.U.V.

AA = 2.5L 170hp (CBTA-M) Golf
 BA = 5 cyl 2.5L 170hp (CBUA-M-PZE-V7) Golf
 DA = 4 cyl 2.0L 200hp (CBFA-PZE-V7) GTI
 FA = VR6 3.6L 280hp (CGFA) Touareg
 GA = 5 cyl 3.0L 330hp + 34 Kw (CGFA) Touareg Hybrid
 HA = 5 cyl 2.5L 170hp (CBTA-M) Passat
 KA = 4 cyl 2.0L 118hp (CBPA) Jetta
 LA = 4 cyl 2.0L TDI 140hp (CJAA) Beetle, Beetle Convertible, Jetta, Jetta SportWagen
 MA = 4 cyl 2.0L TDI 140hp (CJAA) Golf
 NA = VR6 3.6L 280hp (CDVB) Passat
 PA = 4 cyl 2.0L 200hp (CCTA) CC
 RA = 4 cyl 2.0L TDI 140hp (CKRA) Passat
 SA = 4 cyl 2.0L 200hp (CBFA-PZE-V7) CC
 TA = 5 cyl 2.5L 170hp (CBUA-M-PZE-V7) Beetle, Beetle Convertible, Jetta, Jetta SportWagen, Passat
 UA = V6 3.0L TDI 240hp (CNRB) Touareg
 VA = 4 cyl 1.8L 170hp (CPKA) Passat
 WA = 4 cyl 2.0L 210hp (CPLA) Beetle, Beetle Convertible, Jetta GLI
 XA = 4 cyl 1.8L 170hp (CPRA-PZE-V7) Passat
 YA = 4 cyl 2.0L 210hp (CPPA-PZE-V7) Beetle, Beetle Convertible, Jetta GLI
 ZA = VR6 3.6L 280hp (CNNA) CC
 AA = 4 cyl 2.0L 200hp (CCTA) Tiguan
 VA = 4 cyl 2.0L 200hp (CBFA-SULEV II*) EOS
 XA = 5 cyl 2.5L 170hp (CBTA-M) Beetle, Beetle Convertible, Jetta, Jetta SportWagen
 OA = 4 cyl 1.8L 170hp (CPKA) Beetle, Beetle Convertible, Jetta
 1A = 4 cyl 1.8L 170hp (CPRA-PZE-V7) Beetle, Beetle Convertible, Jetta
 3A = 4 cyl 1.4L 150hp + 28 Kw (CNLA-PZE-V7) Jetta Hybrid

* 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 VWV. GTI and Golf models are identified by WMI code of WWW.

October 30, 2013 (Rev 4)

2014 Restraint System:

1A = Active-DirPass - Front Air Bag - DirPass
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
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 Bag

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

Calculate per NHTSA Code

↑

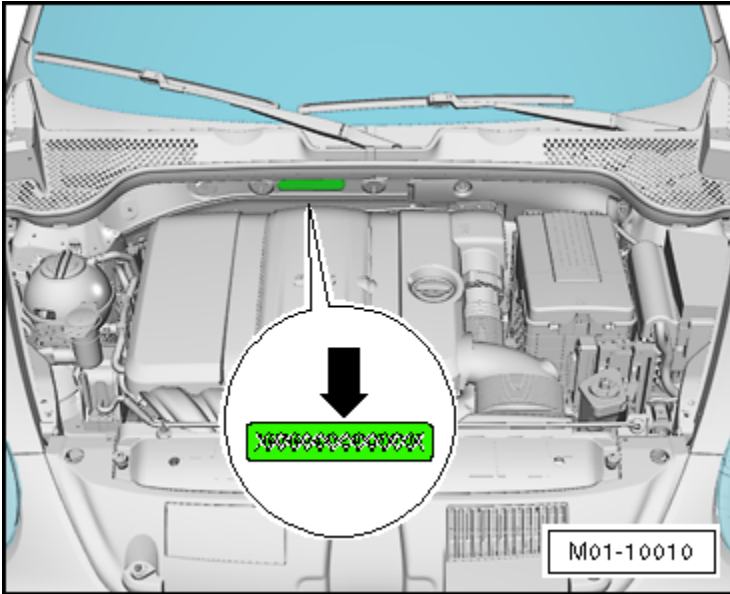
Sequential Product Number

↑

1	Country of origin
2	Manufacturer
3	Vehicle Type
4	Series
5	Engine
6	Restraint system
7	Model
8	(position 7 & 8)
9	Check digit
10	Model year
11	Assembly plant
12	Sequential production number (position 12 - 17)
13	
14	
15	
16	
17	

2014 Volkswagen VIN Decoder (except Routan)

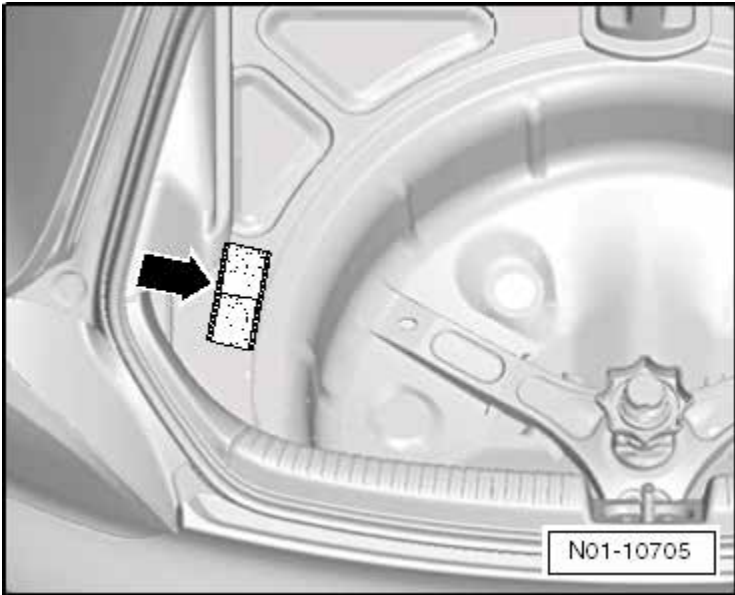
VIN Inside Engine Compartment



Vehicle
Identification

The VIN is located in the center of the bulkhead under the plenum chamber, behind the noise insulation (➡).

Vehicle Data Label



The vehicle data label (➡) is located in the spare wheel well on the left side. The vehicle data label is also in the customer's maintenance booklet.

SALES CODES

Engine Codes

CBFA/CCTA	2.0L TFSI 4-cylinder 4V
CBTA/CBUA	2.5L 5-cylinder 4V
CJAA	2.0L TDI 4-cylinder 4V

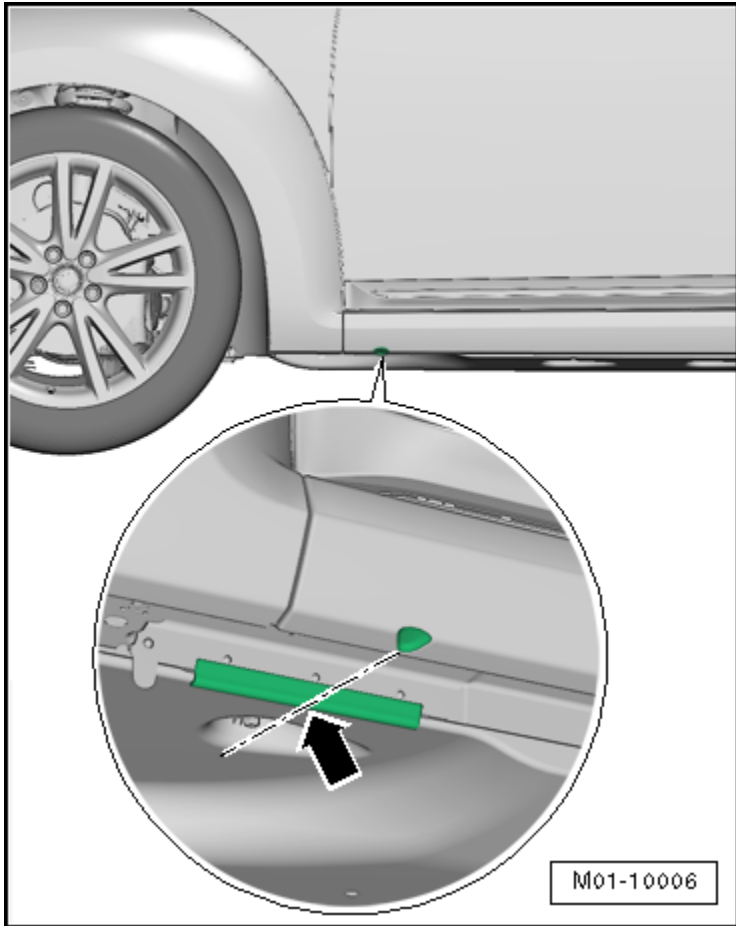
Transmission Codes

0A4	5-speed manual
02Q	6-speed manual
02E	6-speed Direct Shift Gearbox (DSG)
09G	6-speed automatic

VEHICLE LIFTING

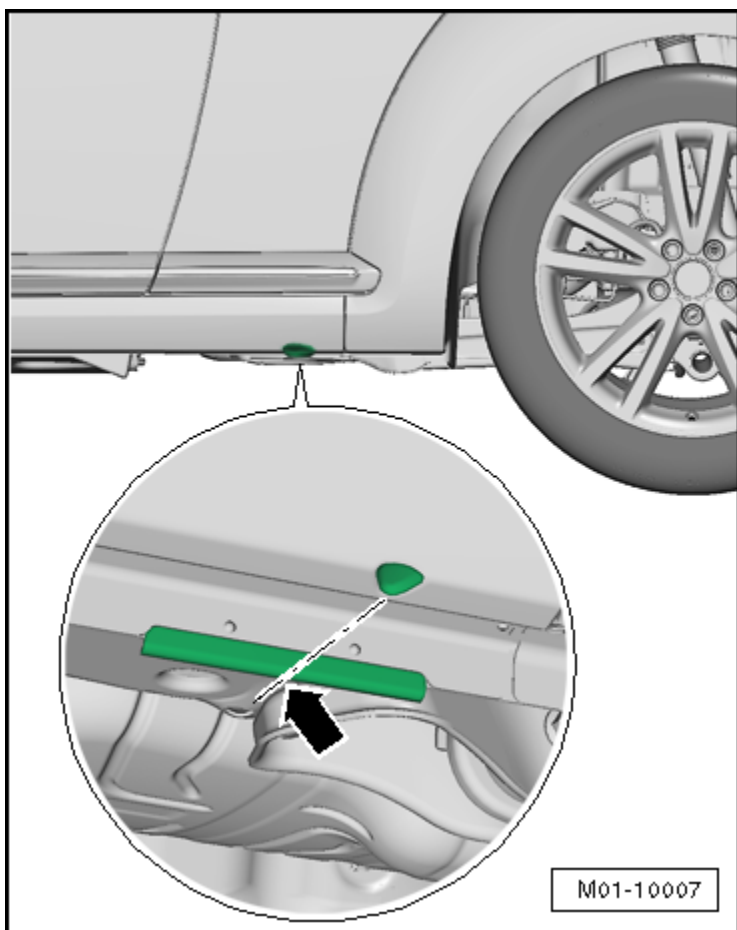
Hoist and Jack Mounting Points

Front



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

Rear

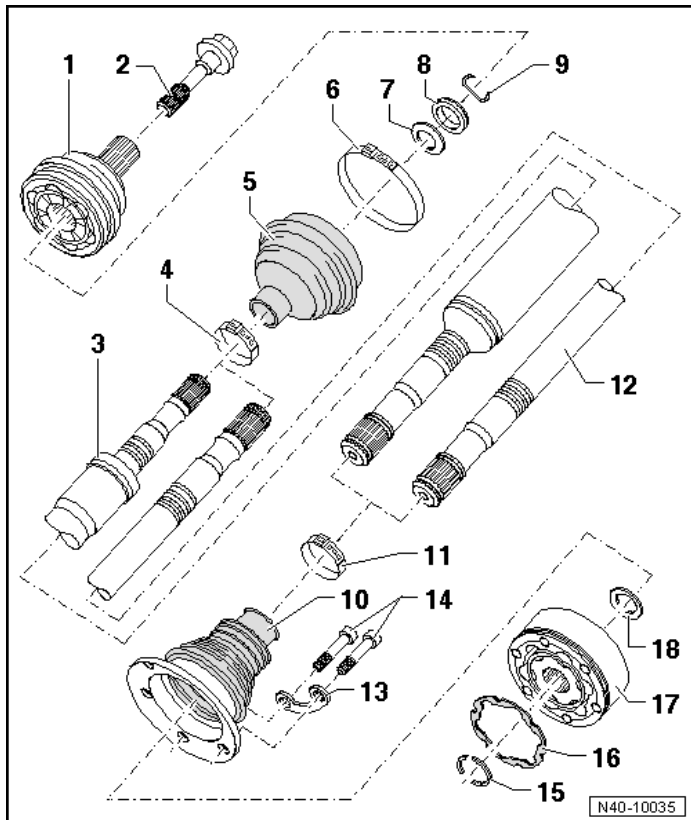


Position the support plate in the side member vertical reinforcement area (➡).

SUSPENSION, WHEELS, STEERING

Front Suspension

Drive Axle Overview, CV Joint VL 100



1 - Outer CV Joint

- Replace only as complete unit.

2 - Bolt

- 200 Nm +180° turn
- Replace after removing

3 - Right Drive Axle

4 - Clamp

- Replace after removing

5 - CV Boot

6 -Clamp

- Replace after removing

7 - Plate Spring

8 - Thrust Ring

9 - Locking Ring

- Replace after removing

10 - CV Boot

11 - Clamp

- Replace after removing

12 - Left Drive Axle

13 - Locking Plate

14 - Internal Multi-Point Bolt

- First tighten diagonally to 10 Nm, then tighten diagonally again to the tightening specification:
- M8 bolt = 40 Nm
- M10 bolt = 70 Nm
- Replace after removing

15 - Locking Ring

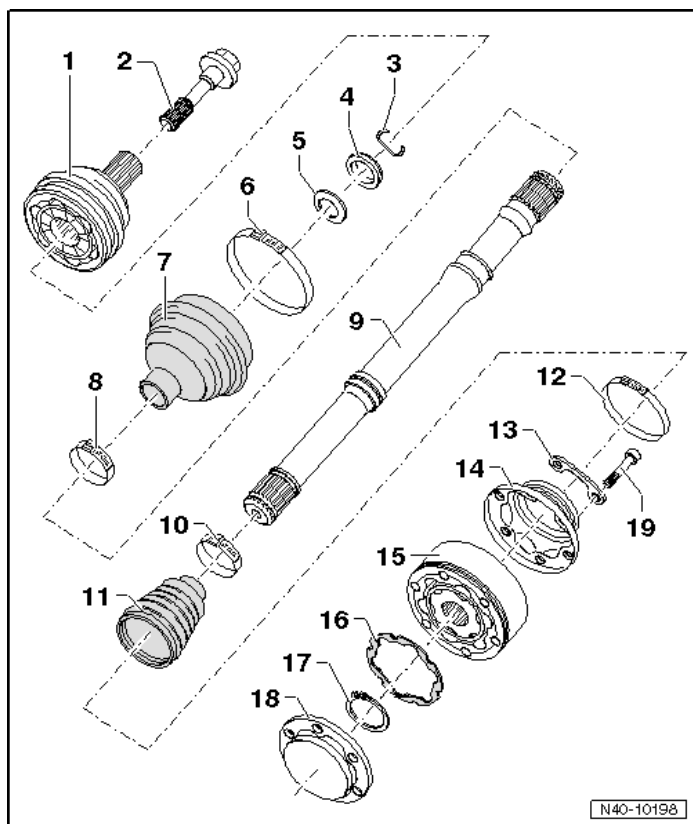
16 - Seal

17 - Inner CV Joint

- Replace only as complete unit.

18 - Plate Spring

Drive Axle Overview, CV Joint VL 107



1 - Outer CV Joint

- Replace only as complete unit.

2 - Bolt

- 200 Nm +180° turn
- Replace after removing

3 - Locking Ring

- Replace after removing

4 - Thrust Ring

5 - Plate Spring

6 -Clamp

- Replace after removing

7 - CV Boot

8 - Clamp

- Replace after removing

9 - Drive Axle

10 - Clamp

- Replace after removing

11 - CV Boot

12 - Clamp

- Replace after removing

13 - Locking Plate

14 - Cover

15 - Inner CV Joint

- Replace only as complete unit.

16 - Seal

17 - Locking Ring

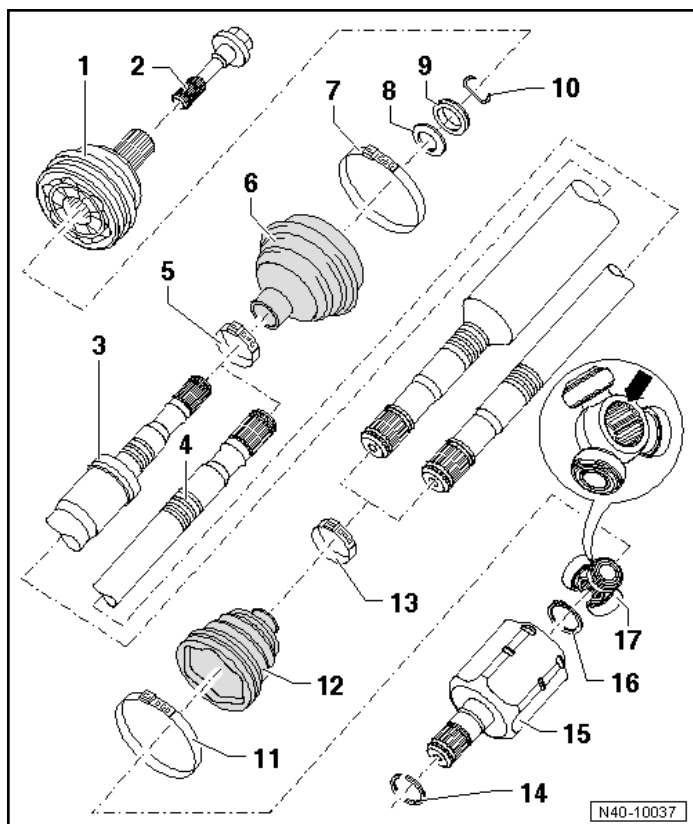
18 - Cover

- Replace after removing

19 - Internal Multi-Point Bolt

- First tighten diagonally to 10 Nm, then tighten diagonally again to the tightening specification.
- 70 Nm
- Replace after removing

Drive Axle Overview, Triple Roller Joint AAR2600i



1 - Outer CV Joint

- Replace only as complete unit.

2 - Bolt

- 200 Nm +180° turn
- Replace after removing

3 - Right Drive Axle

4 - Left Drive Axle

5 - Clamp

- Replace after removing

6 - CV Boot

7 - Clamp

- Replace after removing

8 - Plate Spring

9 - Thrust Ring

10 - Locking Ring

- Replace after removing

11 - Clamp

- Replace after removing

12 - CV Boot for Triple Roller Joint

13 - Clamp

- Replace after removing

14 - Locking Ring

- Replace after removing

15 - Joint

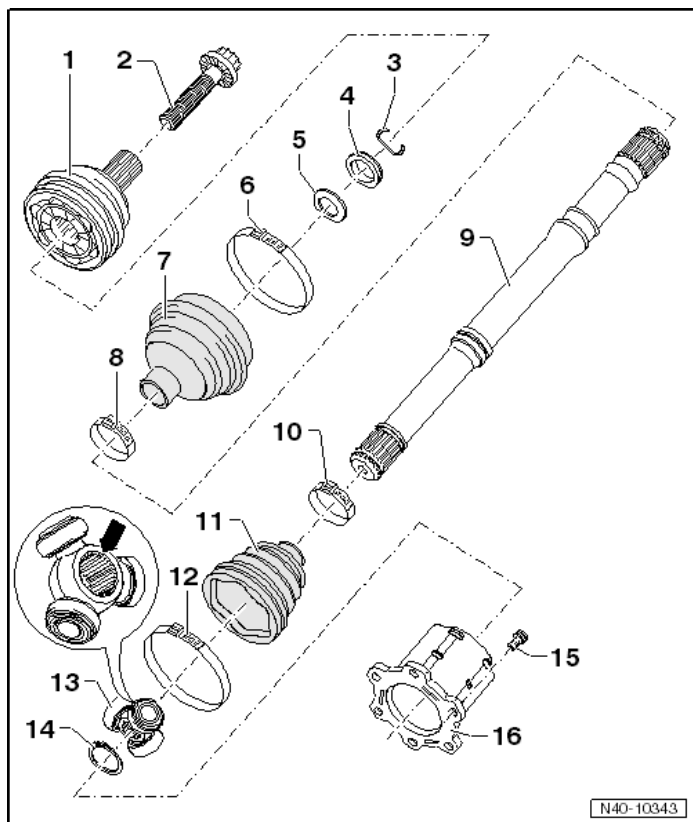
16 - Locking Ring

- Replace after removing

17 - Triple Roller Star with Rollers

- The chamfer -arrow- points to drive axle splines.

Drive Axle Overview, Triple Roller Joint AAR3300i Overview



1 - Outer CV Joint

- Replace only as complete unit.

2 - Bolt

- 200 Nm +180° turn
- Replace after removing

3 - Locking Ring

- Replace after removing

4 - Thrust Ring

5 - Plate Spring

- Replace after removing

6 - Clamp

- Replace after removing

7 - CV Boot

8 - Clamp

- Replace after removing

9 - Drive Axle

10 - Clamp

- Replace after removing

11 - CV Boot for Triple Roller Joint

12 - Clamp

- Replace after removing

13 - Triple Roller Star with Rollers

- The chamfer -arrow- points to drive axle splines.

14 - Locking Ring

- Replace after removing

15 - Internal Multi-Point Bolt

- First tighten diagonally to 10 Nm, then tighten diagonally again to the tightening specification.
- 70 Nm

16 - Joint

10 - Nut

- 100 Nm

11 - Control Arm

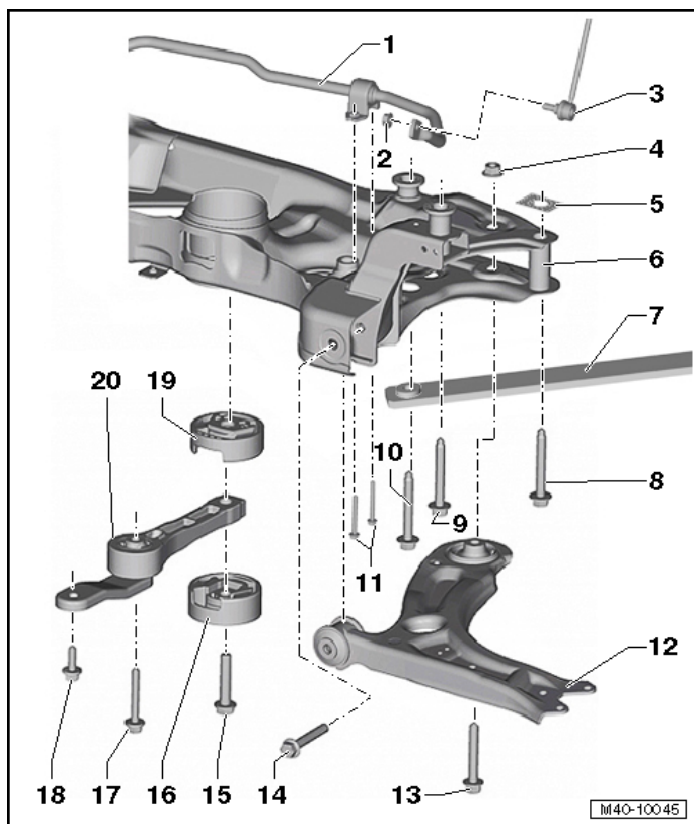
- Replace with ball joint if damaged.

12 - Front Bonded Rubber Bushing

13 - Rear Bonded Rubber Bushing, Rear

14 - Coupling Rod

Subframe Overview



1 - Stabilizer Bar

- There are different versions.

2 - Nut

- 65 Nm

3 - Coupling Rod

4 - Nut

5 - Backing plate

- Replace after removing

6 - Subframe

7 - Subframe Brace

- For Convertible only.

8 - Bolt

- 70 Nm + 180° turn
- Replace after removing

9 - Bolt

- 70 Nm + 180° turn
- Replace after removing

10 - Bolt

- 70 Nm + 180° turn
- Replace after removing

11 - Bolt

- 20 Nm + 90° turn
- Replace after removing

12 - Control Arm

- Replace with ball joint if damaged.

13 - Bolt

- 70 Nm + 180° turn
- Replace after removing

14 - Bolt

- 70 Nm + 180° turn
- Replace after removing

15 - Bolt

- Refer to Engine Mechanical

16 - Lower Bonded Rubber Bushing for Pendulum Support

17 - Bolt

- Refer to Engine Mechanical

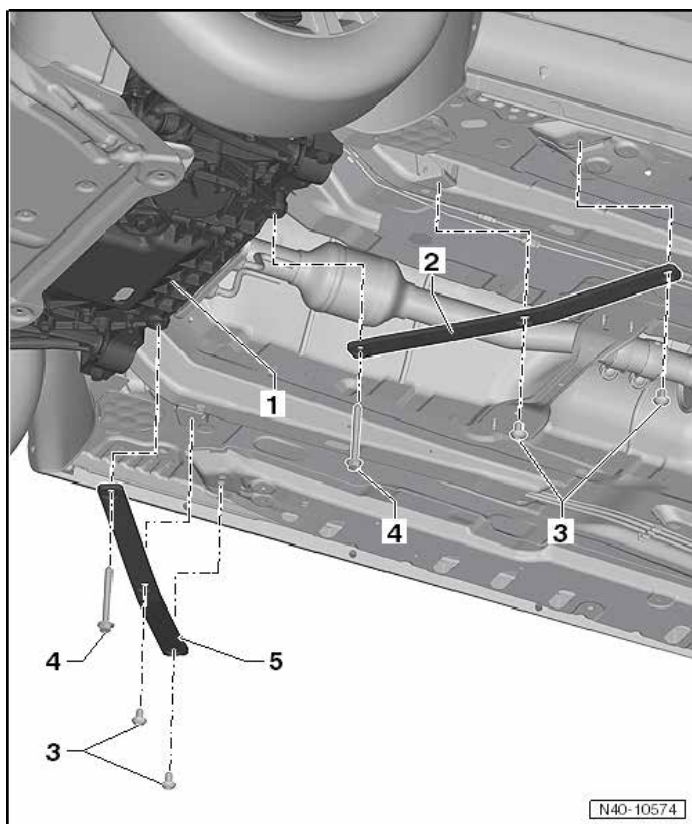
18 - Bolt

- Refer to Engine Mechanical

19 - Upper Bonded Rubber Bushing for Pendulum Support

20 - Pendulum Support

Subframe Brace Overview



1 - Subframe

2 - Left Subframe Brace

3 - Bolt

- 90 Nm + 45° turn
- Replace after removing

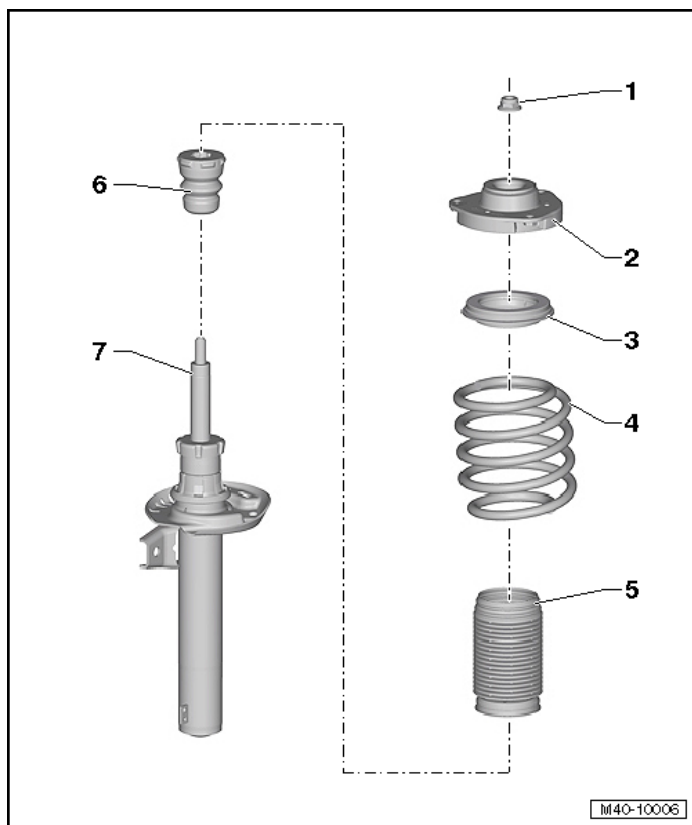
4 - Bolt

- 70 Nm + 180° turn
- Replace after removing

5 - Backing plate

- Replace after removing

Suspension Strut and Upper Control Arm Overview



1 - Nut

- 60 Nm
- Replace after removing

2 - Suspension Strut Bearing

3 - Axial Groove Ball Bearing

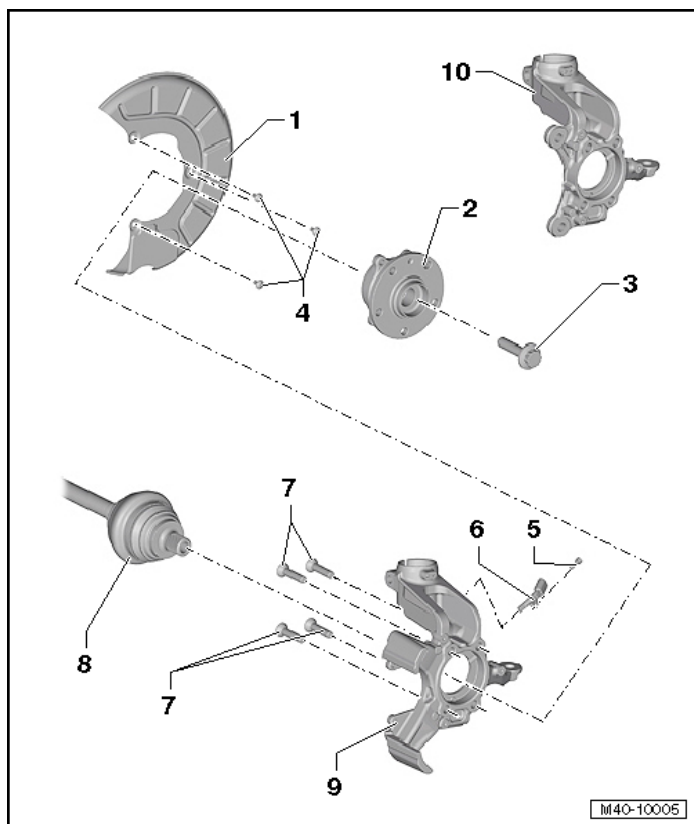
4 - Coil Spring

5 - Protective Sleeve

6 - Stop Buffer

7 - Shock Absorber

Wheel Bearing Overview



1 - Cover Plate

2 - Wheel Hub with Wheel Bearing

- There are different versions.

3 - Bolt

- 200 Nm +180° turn
- Replace after removing

4 - Bolt

- 12 Nm

5 - Hex Socket Head Bolt

- 8 Nm

6 - Left Front ABS Wheel Speed Sensor -G47-/Right Front ABS Wheel Speed Sensor -G45-

7 - Bolt

- 70 Nm + 90° turn
- Replace after removing

8 - Drive Axle

9 - Wheel Bearing Housing

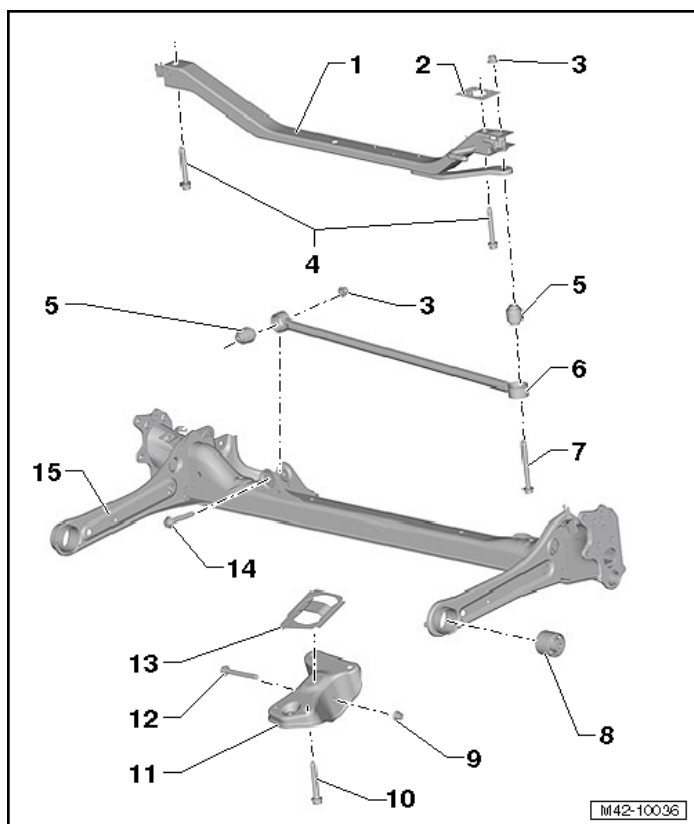
- With integrated brake carrier

10 - Wheel Bearing Housing

- With bolted brake carrier.

Rear Suspension

Axle Beam Overview



1 - Subframe

2 - Backing Plate

3 - Nut

- 70 Nm + 90° turn
- Replace after removing

4 - Bolt

- Follow the tightening sequence:
- 1. 90 Nm + 90° additional turn
- 2. Loosen one full turn (360°)
- 3. 90 Nm + 180° additional turn
- Replace after removing

5 - Bonded Rubber Bushing

6 - Crossbrace

7 - Bolt

8 - Bonded Rubber Bushing

9 - Nut

- 70 Nm + 90° turn
- Replace after removing

10 - Bolt

- 50 Nm + 45° turn
- Replace after removing

11 - Bracket

12 - Bolt

- Replace after removing

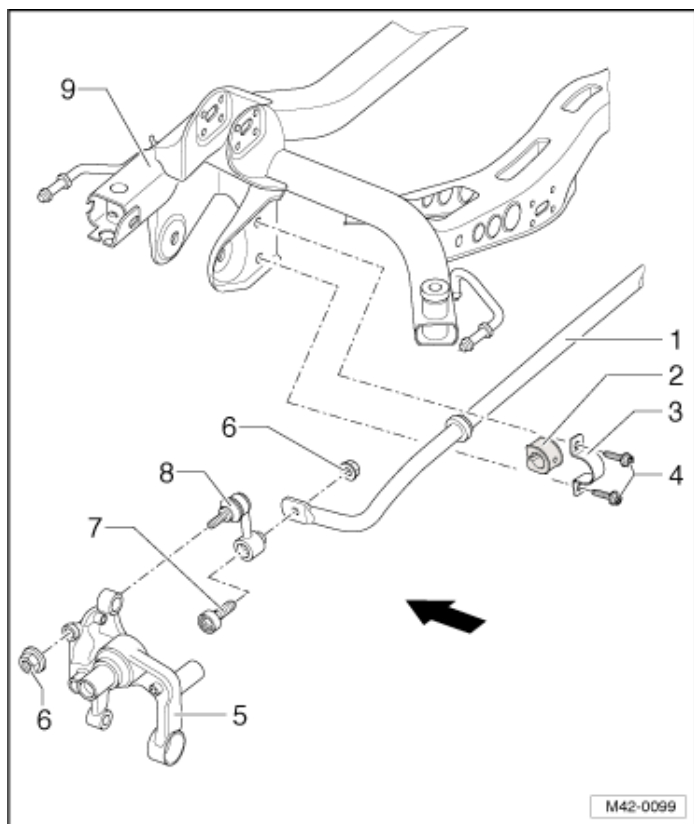
13 - Cover

14 - Bolt

- Replace after removing

15 - Axle Beam

Stabilizer Bar Overview



1 - Stabilizer Bar

- There are different versions.

2 - Bearing

3 - Clamp

4 - Bolt

- 25 Nm + 45° turn
- Replace after removing

5 - Wheel Bearing Housing

6 - Nut

- 45 Nm
- Replace after removing

7 - Bolt

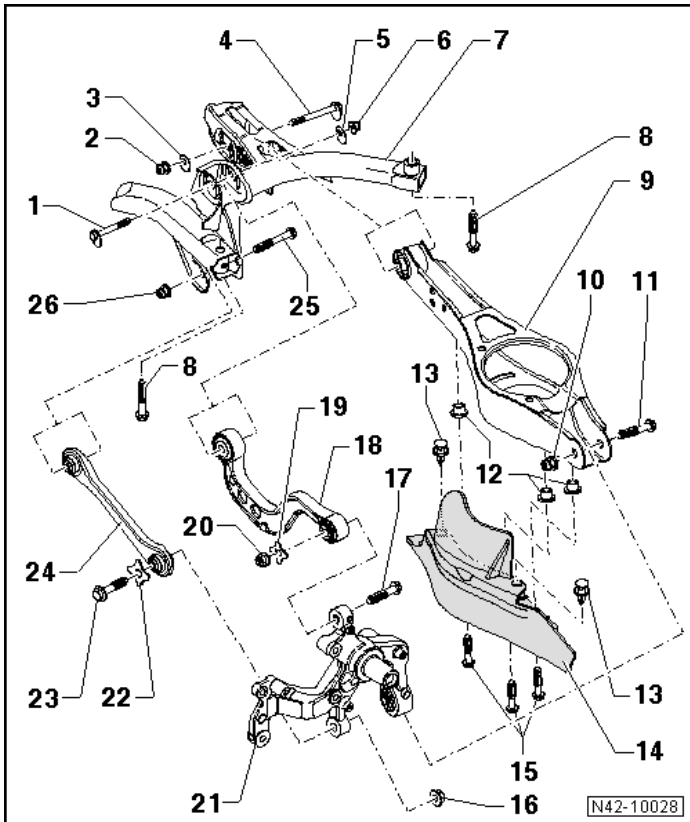
- Replace after removing

8 - Coupling Rod

-

9 - Subframe

Subframe Overview



1 - Eccentric Bolt

2 - Nut

- 95 Nm
- Replace after removing
- Always tighten threaded connections in curb weight position.

3 - Eccentric Washer

4 - Eccentric Bolt

5 - Eccentric Washer

6 - Nut

- 95 Nm
- Replace after removing
- Always tighten threaded connections in curb weight position.

7 - Subframe

8 - Bolt

- Follow the tightening sequence:
- 1. 90 Nm + 90° additional turn
- 2. Loosen one full turn (360°)
- 3. 90 Nm + 180° additional turn
- Replace after removing

9 - Lower Transverse Link**10 - Nut**

- 70 Nm + 180° turn
- Replace after removing
- Always tighten threaded connections in curb weight position.

11 - Bolt

- Replace after removing

12 - Threaded Rivet

- M6

13 - Expanding Rivet**14 - Stone Chip Protection****15 - Bolt**

- 8 Nm

16 - Nut

- Replace after removing
- Always tighten threaded connections in curb weight position.

17 - Bolt

- 130 Nm + 180° turn
- Refer to Engine Mechanical

18 - Upper Transverse Link**19 - Washer****20 - Nut**

- Replace after removing
- Always tighten threaded connections in curb weight position.

21 - Wheel Bearing Housing**22 - Washer****23 - Bolt**

- 130 Nm + 180° additional turn
- Replace after removing
- Always tighten threaded connections in curb weight position.

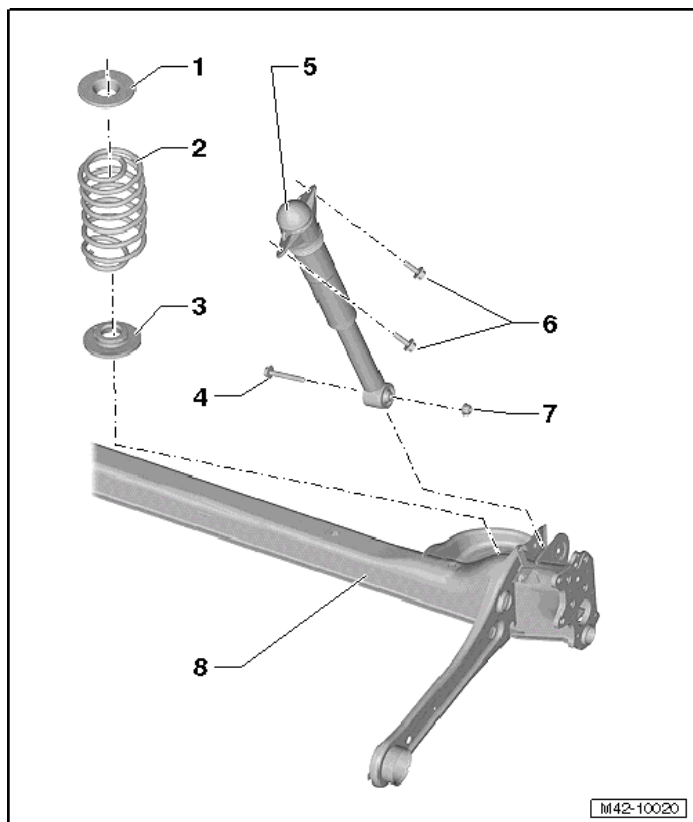
24 - Tie Rod**25 - Bolt**

- Replace after removing

26 - Nut

- 70 Nm + 180° turn
- Replace after removing
- Always tighten threaded connections in curb weight position

Suspension Strut, Shock Absorber and Spring Overview, Torsion Beam



1 - Spring Seat

2 - Coil Spring

3 - Base Plate

4 - Bolt

- 40 Nm + 90° turn
- Replace after removing
- Always tighten threaded connections in curb weight position

5 - Shock Absorber

6 - Bolt

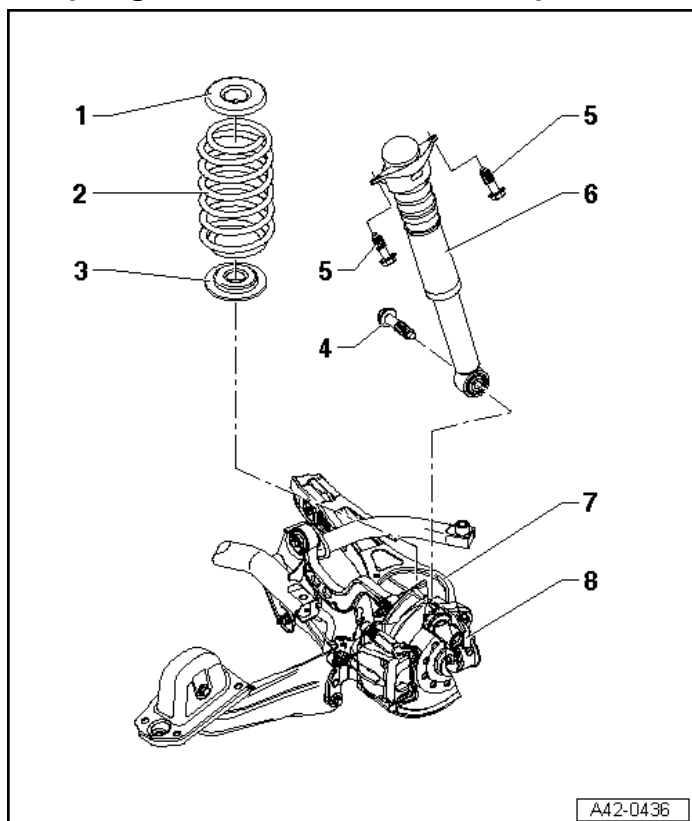
- 50 Nm + 145° turn
- Replace after removing

7 - Nut

- Replace after removing

8 - Axle Beam

Suspension Strut, Shock Absorber and Spring Overview, Multi-Link Suspension



1 - Upper Spring Support

2 - Coil Spring

3 - Lower Spring Support

4 - Bolt

180 Nm

5 - Bolt

50 Nm + 45° turn

Replace after removing

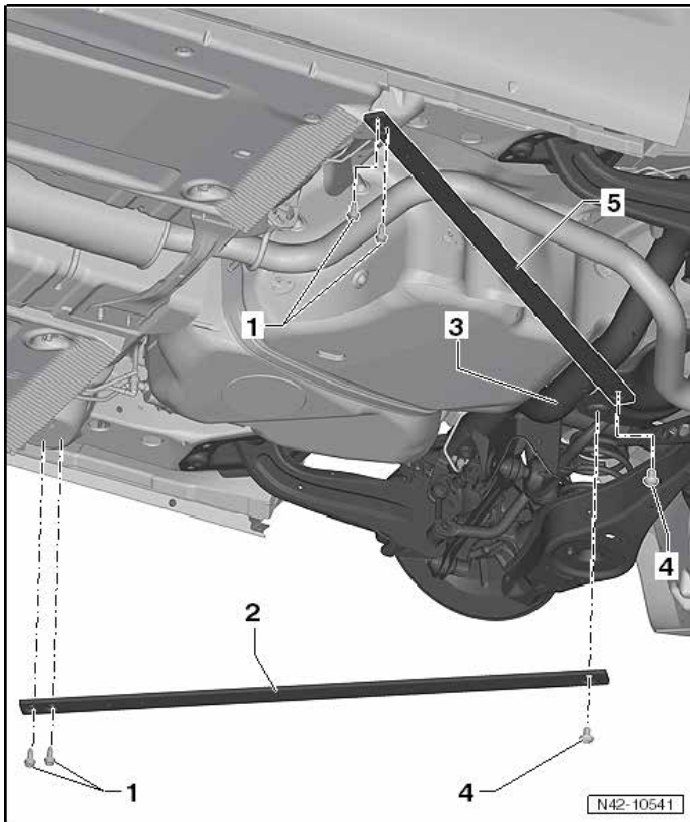
6 - Shock Absorber

There are different versions of the suspension,

7 - Lower Transverse Link

8 - Wheel Bearing Housing

Tension Struts Overview



1 - Bolt

- 40 Nm + 45° turn
- Replace after removing

2 - Right Tension Strut

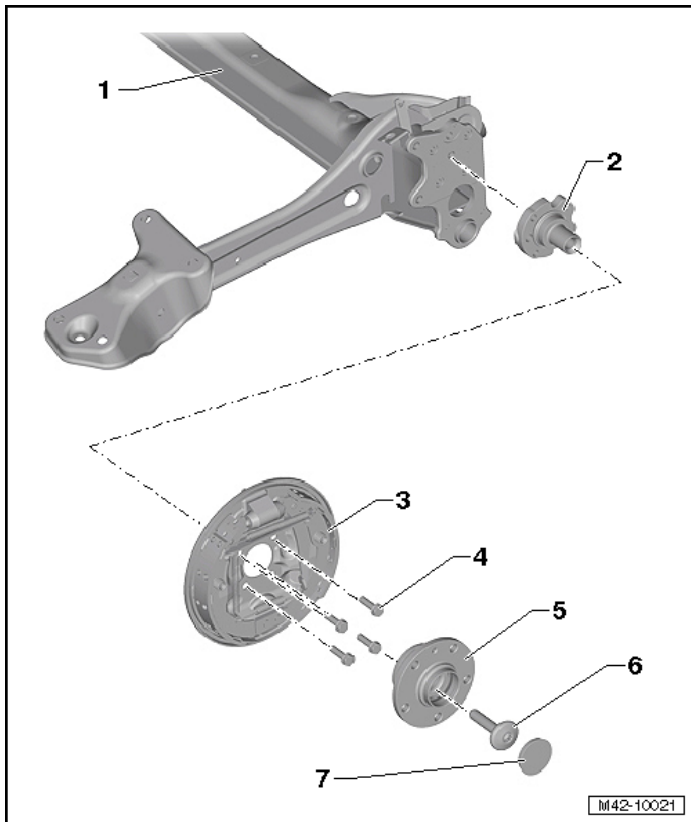
3 - Subframe

4 - Bolt

- 50 Nm + 45° turn
- Replace after removing

5 - Left Tension Strut

Wheel Bearing, Drum Brake and Torsion Beam Overview



1 - Axle Beam

2 - Stub Axle

3 - Brake Carrier with Brake Shoes

4 - Bolt

- 30 Nm + 90° turn
- Replace after removing

5 - Wheel Hub with Wheel Bearing

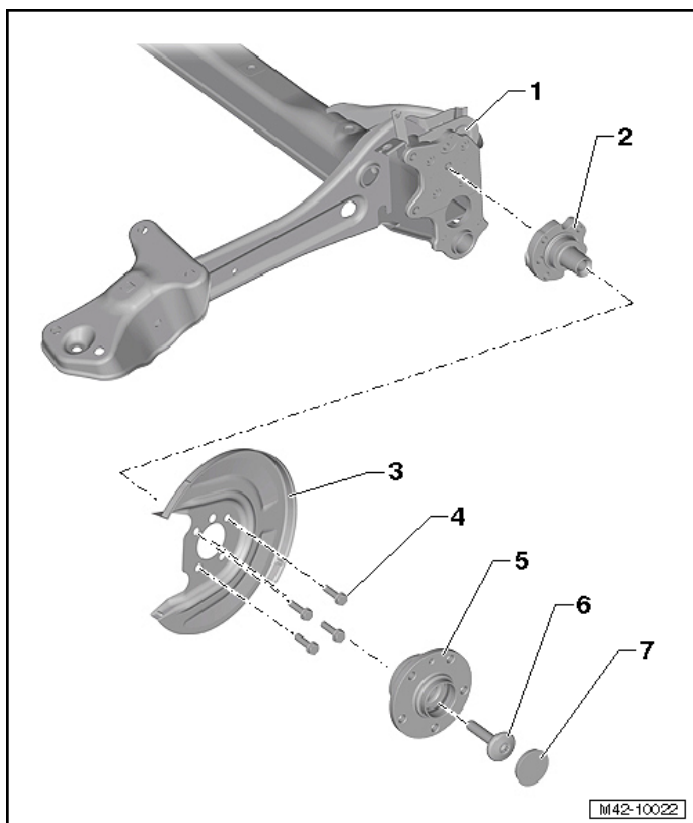
6 - Bolt

- 30 Nm + 90° turn
- Replace after removing

7 - Dust Cap

- Replace after removing

Wheel Bearing, Disc Brake and Torsion Beam Overview



1 - Axle Beam

2 - Stub Axle

3 - Cover Plate

4 - Bolt

- 30 Nm + 90° turn
- Replace after removing

5 - Wheel Hub with Wheel Bearing

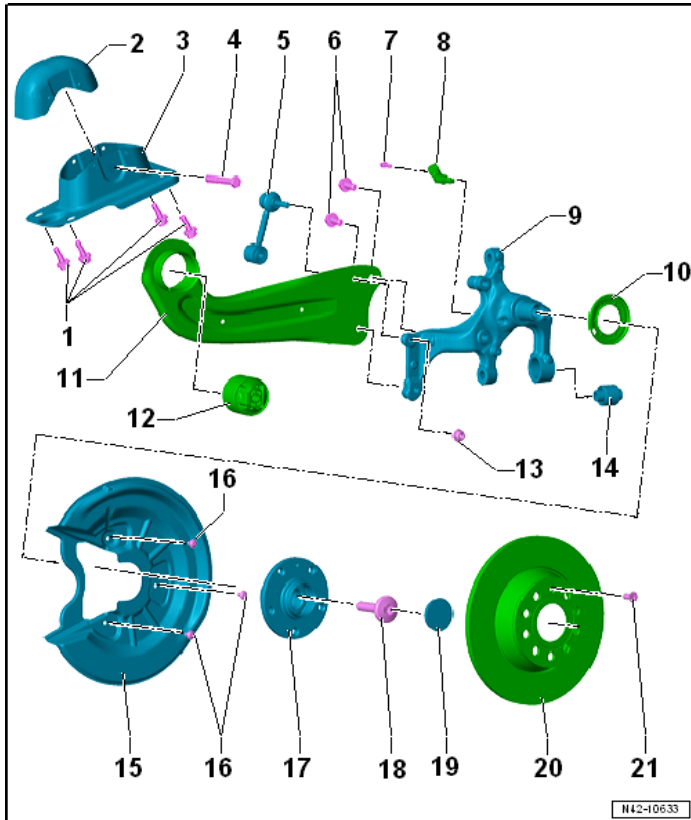
6 - Bolt

- 180 Nm + 180° turn
- Replace after removing

7 - Dust Cap

- Replace after removing

Wheel Bearing, Multi-Link Suspension Overview



1 - Bolt

- 50 Nm + 45° turn
- Replace after removing

2 - Cover

3 - Bracket

4 - Bolt

- 90 Nm + 90° turn
- Replace after removing

5 - Coupling Rod

6 - Bolt

- 90 Nm + 45° turn
- Replace after removing
- For tightening sequence, refer to Trailing Arm with Mounting Bracket in the Repair Manual.

7 - Bolt

- 8 Nm

8 - Right Rear ABS Wheel Speed Sensor -G44-/Left Rear ABS Wheel Speed Sensor -G46-

9 - Wheel Bearing Housing

10 - Wheel Bearing Seal

11 - Trailing Link

12 - Bonded Rubber Bushing

13 - Nut

- 45 Nm
- Replace after removing

14 - Bonded Rubber Bushing

15 - Cover Plate

16 - Bolt

- 12 Nm

17 - Wheel Hub with Wheel Bearing

18 - Bolt

- 180 Nm + 180° turn
- Replace after removing
- Loosen and tighten using Bit XZN 18 -T10162-

19 - Dust Cap

-

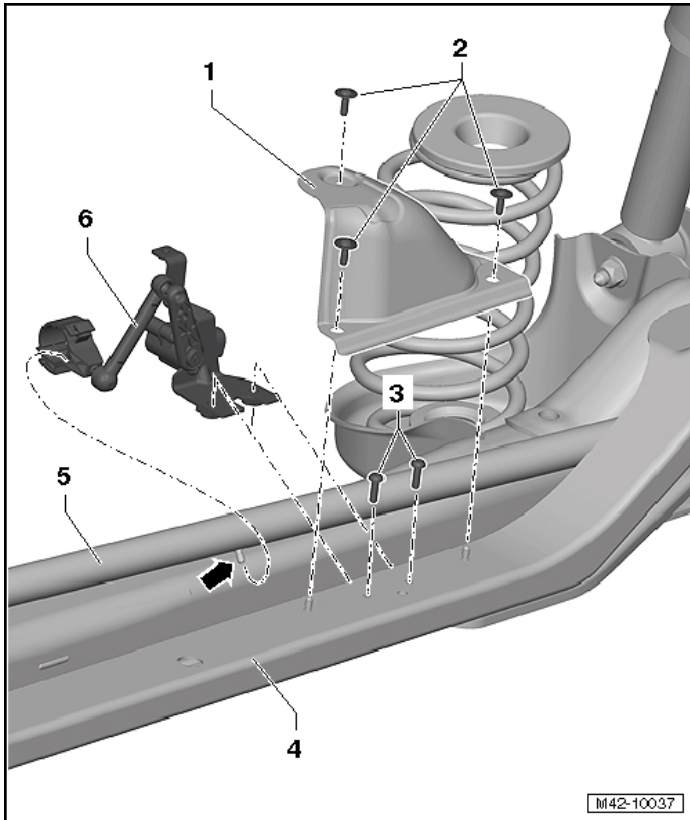
20 - Brake Rotor

21 - Bolt

- 4 Nm

Self-Leveling Suspension

Rear Vehicle Level Sensor Overview, Torsion Beam



1 - Heat Shield

2 - Bolt

2.5 Nm

3 - Bolt

5 Nm

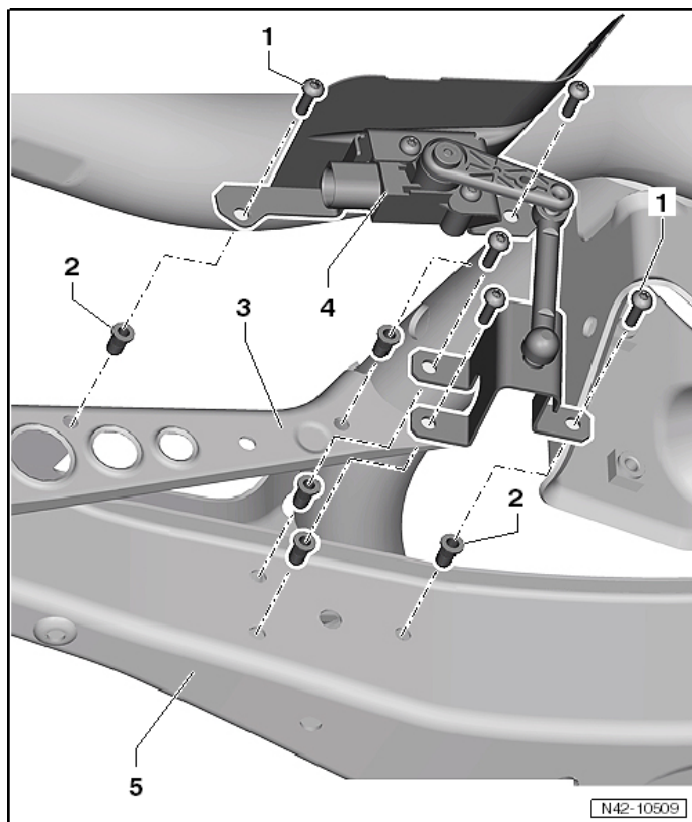
4 - Subframe

5 - Crossbrace

6 - Left Rear Level Control System Sensor -G76-

After replacing, perform basic setting of the headlamps.

Rear Vehicle Level Sensor Overview, Multi-Link Suspension



1 - Bolt

- 5 Nm
- M5 x 20

2 - Pop Rivet

3 - Subframe

4 - Left Rear Level Control System Sensor -G76-

- After replacing, perform basic setting of the headlamps.

5 - Lower Transverse Link

Wheels, Tires, Wheel Alignment

Wheel Alignment Specified Values with Torsion Beam Rear Suspension

Front suspension	Basic suspension	Sport suspension	Comfort suspension
Production Relevant No. (PR. No.)	2UA	2UC	2UD
Total toe (wheels not pressed)	10' ± 10'	10' ± 10'	10' ± 10'
Camber (wheels in straight ahead position)	-40' ± 30'	-40' ± 30'	-33' ± 30'
Maximum permissible difference between both sides	30'	30'	30'
Toe-out angle ¹⁾ with steering wheel turned 20° to left and right	1°32' ± 20'	1°32' ± 20'	1°25' ± 20'
Caster	7° 53' ± 30'	7° 53' ± 30'	7° 42' ± 30'
Maximum permissible difference between both sides	30'	30'	30'
Standing height (mm)	386 ± 10	386 ± 10	396 ± 10

¹⁾ Depending on the manufacturer, the toe out angle difference can also be indicated negatively in the alignment computer.

Rear suspension	Basic suspension	Sport suspension	Comfort suspension
Camber	-1° ± 30'	-1° ± 30'	-1° ± 30'
Maximum permissible difference between both sides	30'	30'	30'
Total toe (at prescribed camber)	+23' ± 10'	+23' ± 10'	+21' ± 10'
Maximum permissible deviation from direction of rotation	20'	20'	20'
Standing height (mm)	396 ± 10	396 ± 10	406 ± 10

Wheel Alignment Specified Values with Multi-Link Rear Suspension

Front suspension	Basic suspension	Sport suspension	Comfort suspension
Production Relevant No. (PR. No.)	2UA	2UC	2UD
Total toe (wheels not pressed)	10' ± 10'	10' ± 10'	10' ± 10'
Camber (wheels in straight ahead position)	-40' ± 30'	-40' ± 30'	-33' ± 30'
Maximum permissible difference between both sides	30'	30'	30'
Toe-out angle ¹⁾ with steering wheel turned 20° to left and right	1°32' ± 20'	1°32' ± 20'	1°25' ± 20'
Caster	7° 53' ± 30'	7° 53' ± 30'	7° 42' ± 30'
Maximum permissible difference between both sides	30'	30'	30'
Standing height (mm)	386 ± 10	386 ± 10	396 ± 10

¹⁾ Depending on the manufacturer, the toe out angle difference can also be indicated negatively in the alignment computer.

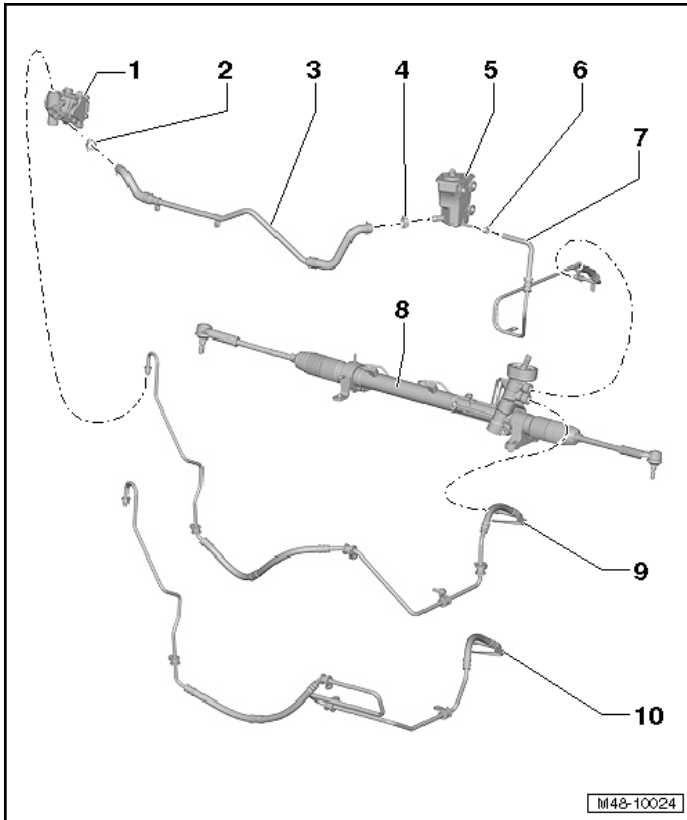
Rear suspension	Basic suspension	Sport suspension	Comfort suspension
Camber	-1° ± 30'	-1° ± 30'	-1° ± 30'
Maximum permissible difference between both sides	30'	30'	30'
Total toe (at prescribed camber)	+10' ± 10'	+10' ± 10'	+10' ± 10'
Maximum permissible deviation from direction of rotation	20'	20'	20'
Standing height (mm)	396 ± 10	396 ± 10	406 ± 10

Wheel Bolt Tightening Specifications

Tightening Specification: 140 Nm

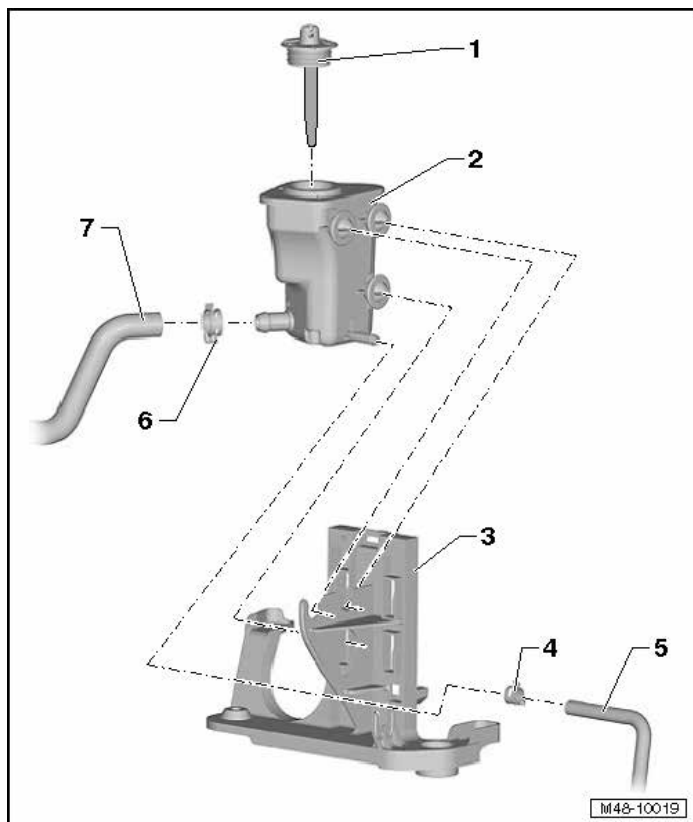
Steering

Hydraulic Lines and Reservoir Overview, Hydraulic Lines, 5-Cylinder Gasoline Engine



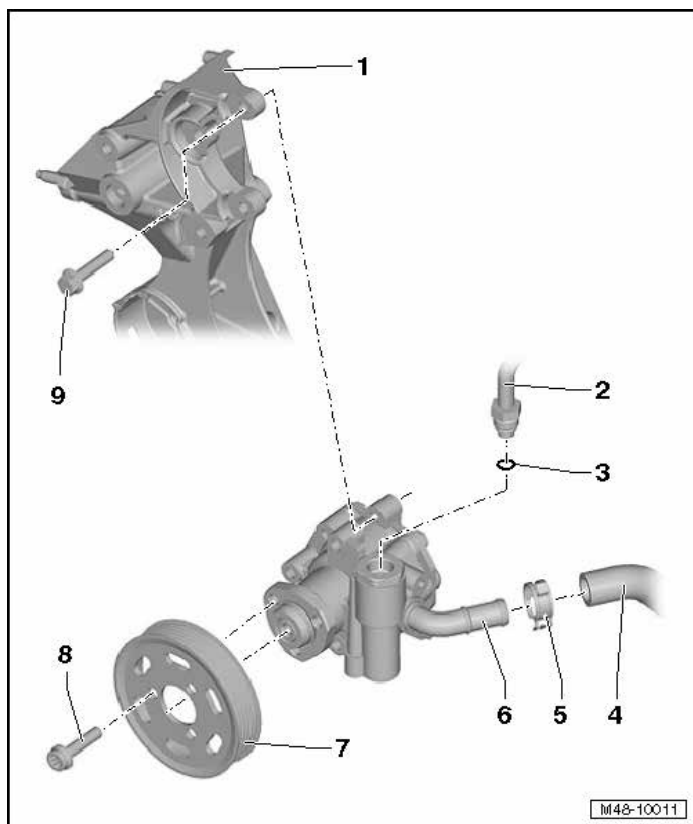
- 1 - Power Steering Pump
- 2 - Clamp
- 3 - Intake Hose
- 4 - Clamp
- 5 - Reservoir
- 6 - Clamp
- 7 - Return Hose
- 8 - Steering Gear
- 9 - Extension Hose
- 10 - Extension Hose

Hydraulic Lines and Reservoir Overview, Reservoir 5-Cylinder Gasoline Engine



- 1 - Cap with Dipstick
- 2 - Reservoir
- 3 - Bracket
- 4 - Clamp
- 5 - Return Hose
- 6 - Intake Hose
- 7 - Clamp

Power Steering Pump Overview



1 - Bracket

2 - Pressure Line

32 Nm

3 - Seal

Replace after removing

4 - Intake Hose

5 - Spring Clamp

6 - Power Steering Pump

Fill with oil prior to installation.

7 - Belt Pulley

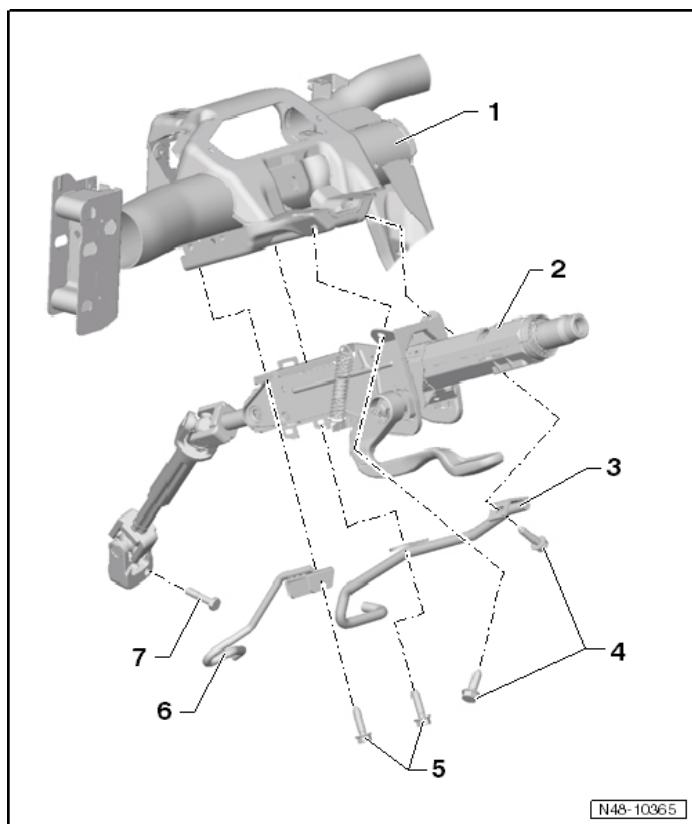
8 - Bolt

22 Nm

9 - Bolt

22 Nm

Steering Column Overview



1 - Assembly Carrier with Bracket

2 - Steering Column

3 - Brake Pedal Crash Brace

4 - Bolt

20 Nm

For tightening sequence, refer to Steering Column in the Repair Manual.

5 - Bolt

20 Nm

For tightening sequence, refer to Steering Column in the Repair Manual.

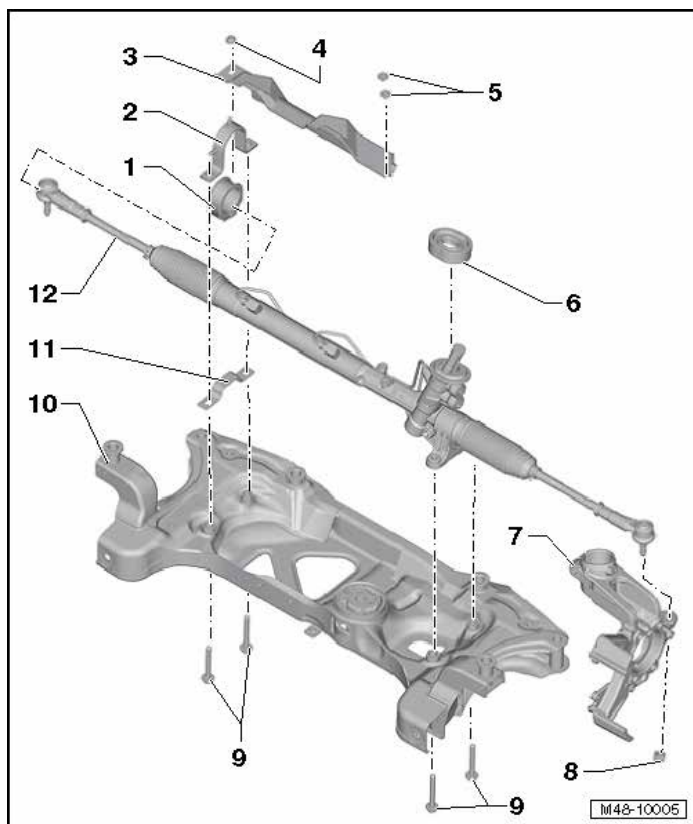
6 - Clutch Pedal Crash Brace

7 - Bolt

30 Nm

Replace after removing

Steering Gear Overview, Hydraulic Steering Gear



1 - Rubber Bushing

2 - Clamp

- Replace after removing

3 - Heat Shield

4 - Nut

- 6 Nm

5 - Bolt

- 23 Nm

6 - Seal

7 - Wheel Bearing Housing

8 - Nut

- 20 Nm + 90° turn
- Replace after removing

9 - Bolt

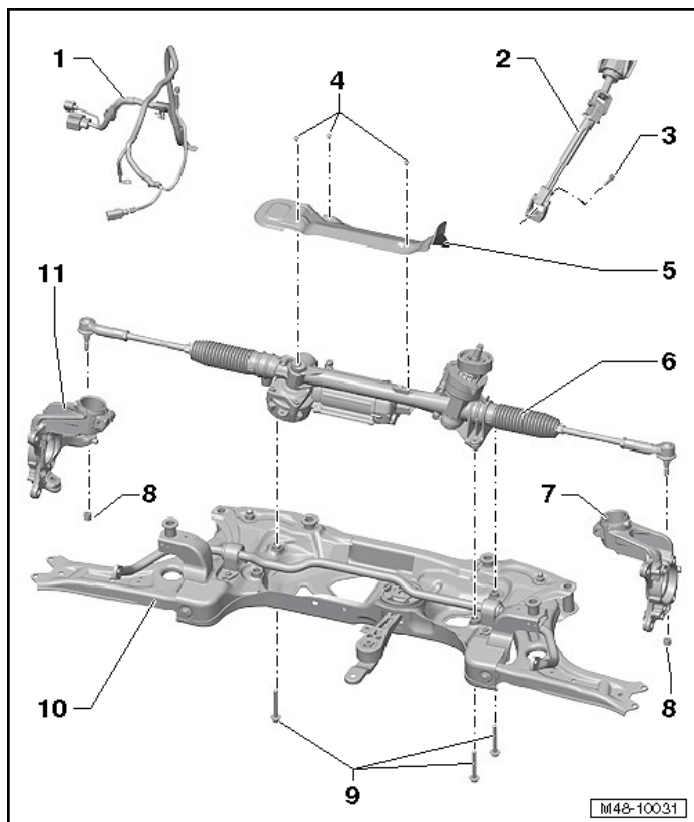
- 50 Nm + 90° turn
- Replace after removing

10 - Subframe

11 - Washer

12 - Power-Assisted Steering Gear

Steering Gear Overview, Electro-Mechanical Steering Gear



1 - Electric Wire

2 - Universal Joint

3 - Bolt

- 30 Nm
- M8 x 35
- Replace after removing

4 - Bolt

- 6 Nm

5 - Heat Shield

6 - Power-Assisted Steering Gear

7 - Left Wheel Bearing Housing

8 - Nut

- 20 Nm + 90° turn
- M12 x 1.5
- Replace after removing

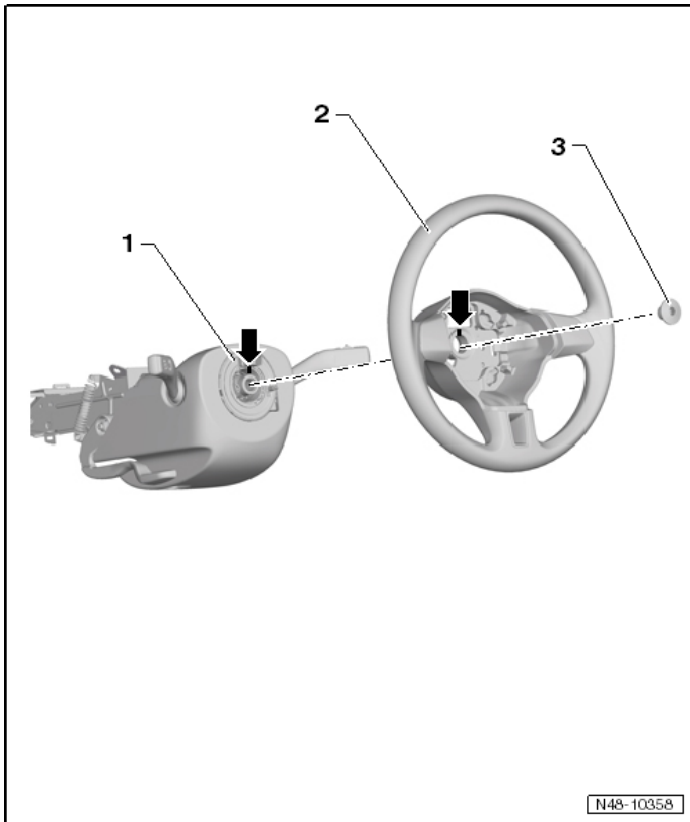
9 - Bolt

- 50 Nm + 90° turn
- Replace after removing

10 - Subframe

11 - Right Wheel Bearing Housing

Steering Wheel Overview



1 - Steering Column

2 - Steering Wheel

- There are different versions

3 - Bolt

- 30 Nm + 90° turn
- Replace after removing

BRAKE SYSTEM

General, Technical Data

Front Brakes

Engine version	PR Number	Front wheel brake
2.5L 125 kW	1ZP/1ZE	FN 3 (15")
2.0L 147 kW	1ZA/1ZB/1LV	FN 3 (16")
2.0L TDI 103 kW	1ZP/1ZE	FN 3 (15")

Rear Brakes with Twist Beam Rear Suspension

Engine version	PR Number	Rear wheel brake
2.5L 125 kW	1KS/1KT	Bosch
2.5L 125 kW	1KG	TB 230 X 32
2.5L 125 kW	1KD/1KU 1)	TRW CI-38 (15)

¹⁾ Applies from 12/10/2012

Rear Brakes with Multi-Link Rear Axle

Engine version	PR Number	Rear wheel brake
2.0L 147 kW	1KS/1KT	Bosch
2.5L 125 kW		
2.0L TDI 103 kW		
2.0L 147 kW	1KD/1KU	TRW
2.5L 125 kW		
2.0L TDI 103 kW		

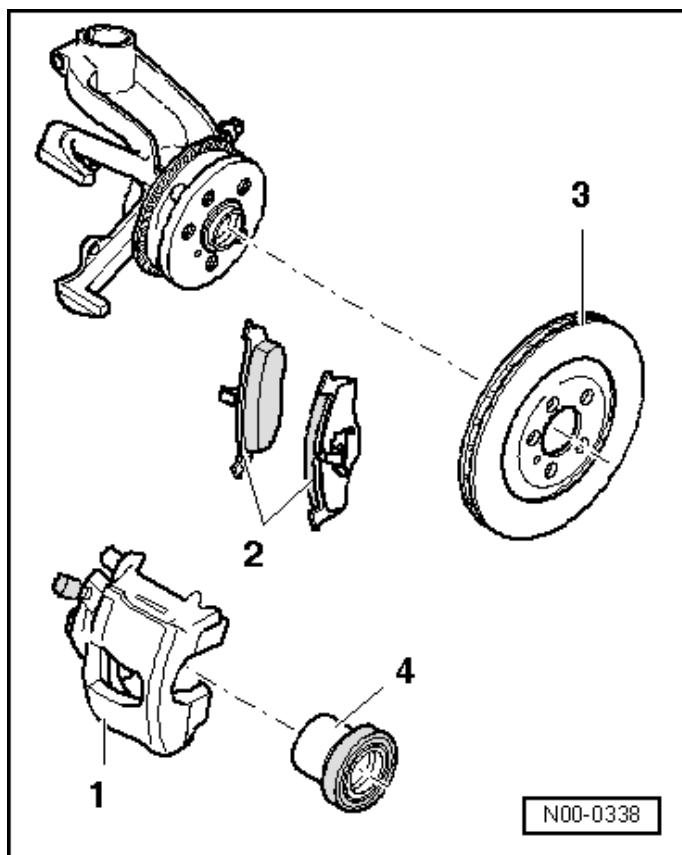
¹⁾ Applies from 12/10/2012

Brake Master Cylinder and Brake Booster

Brake booster	Diameter in inches	10
Master brake cylinder ¹⁾	Diameter in mm	22.2
Master brake cylinder ¹⁾	Diameter in mm	23.81

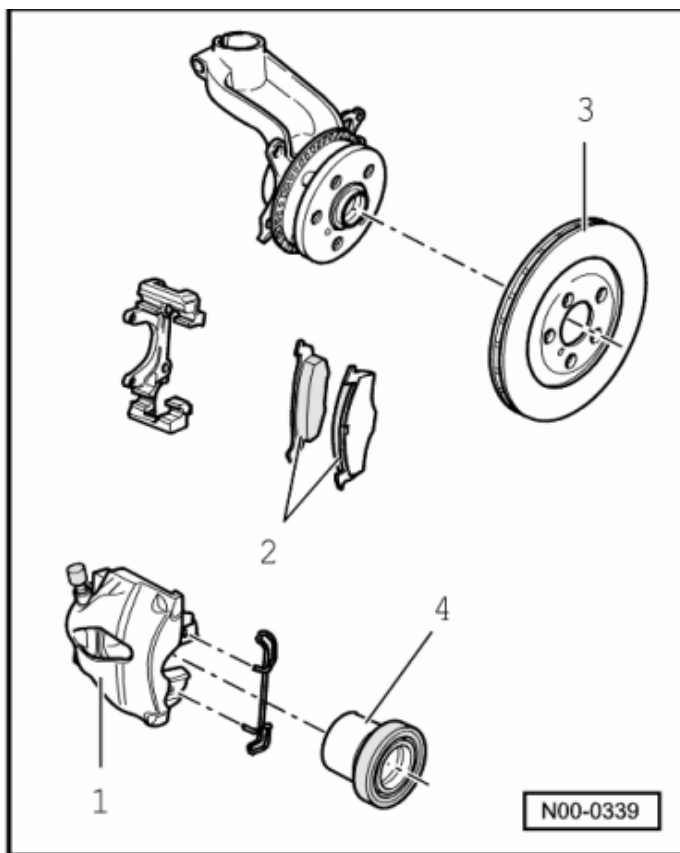
¹⁾ For the correct allocation, refer to the Electronic Parts Catalog (ETKA).

FS III Front Brakes



Item	PR Number		1ZM/1ZQ
1	Brake caliper		FS III (15)
2	Brake pad, thickness	mm	14
	Brake pad wear limit without back plate	mm	2
3	Brake disc	Diameter in mm	280
	Brake disc thickness	mm	22
	Brake disc wear limit	mm	19
4	Brake caliper piston	Diameter in mm	54

Front Brakes, FN 3

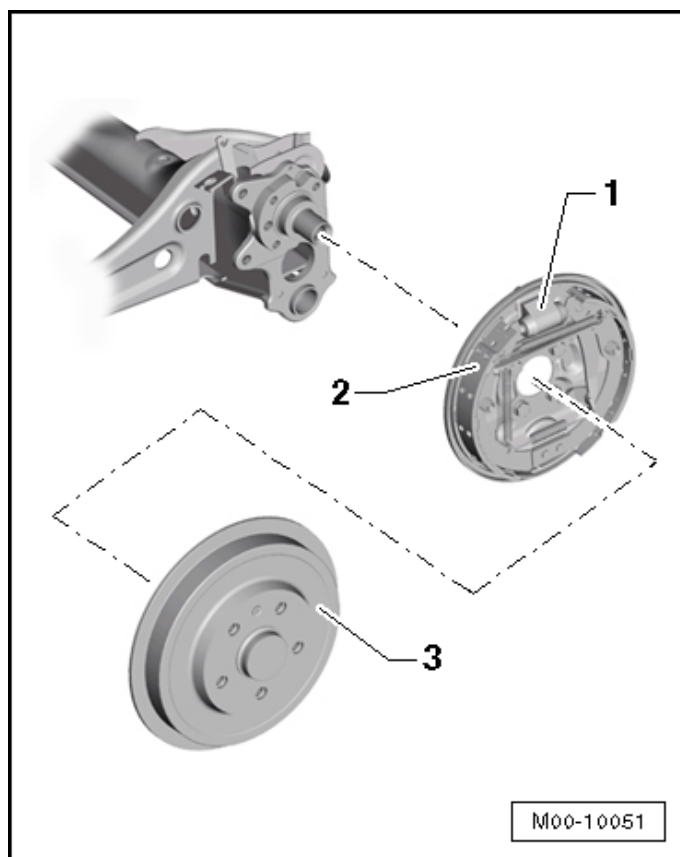


Item	PR Number		1ZE/1ZP
1	Brake caliper		FN 3 (15")
2	Brake pad, thickness	mm	14
	Brake pad wear limit without back plate	mm	2
3	Brake disc	Diameter in mm	288
	Brake disc thickness	mm	25
	Brake disc wear limit	mm	22
4	Brake caliper piston	Diameter in mm	54

Front Brakes, FN 3 (cont'd.)

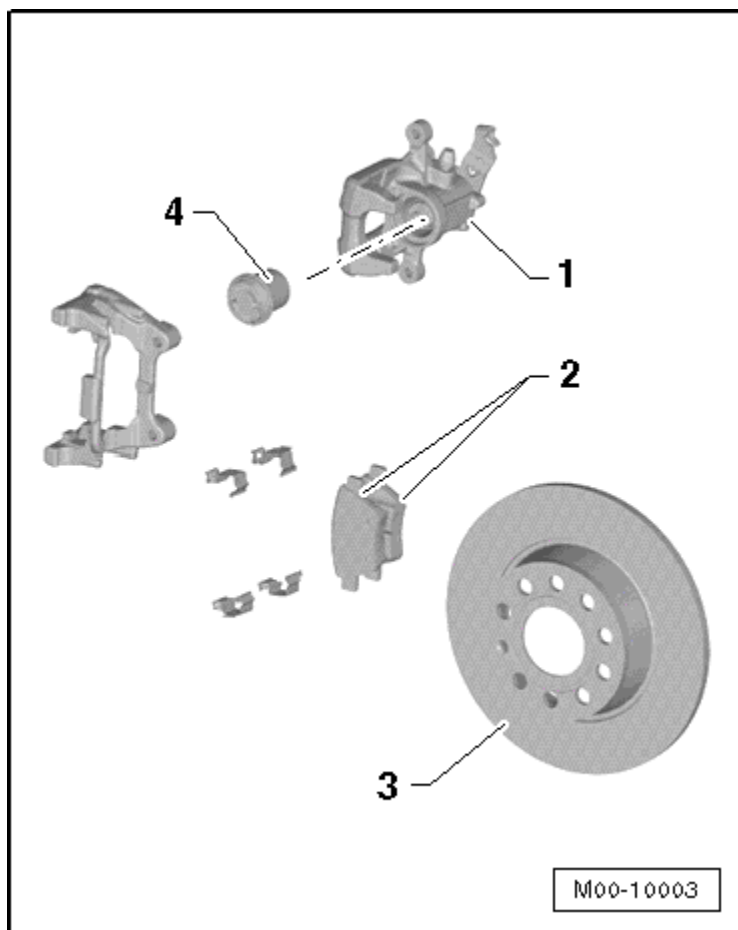
Item	PR Number	1LV/1ZA/1ZB
1	Brake caliper	FN 3 (16")
2	Brake pad thickness	mm 14
	Brake pad wear limit without back plate	mm 2
3	Brake disc	Diameter in mm 312
	Brake disc thickness	mm 25
	Brake disc wear limit	mm 22
4	Brake caliper piston	Diameter in mm 54

Rear Drum Brakes



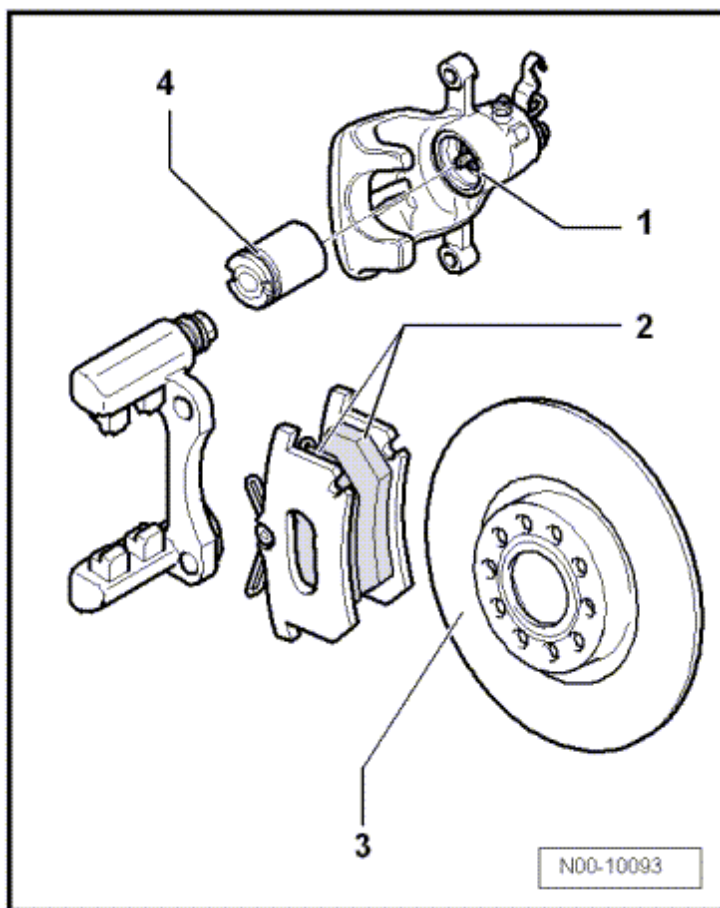
Item	PR Number		1KG
1	Wheel brake cylinder	mm	20
2	Brake pad width	mm	32
	Brake pad thickness	mm	5
	Brake pad minimum thickness	mm	2.5
3	Brake drum	Diameter in mm	230
	Brake drum wear limit	Diameter in mm	231.5

Rear Brakes, Bosch Disc



Item	PR Number		1KS/1KT
1	Brake caliper		Bosch
2	Brake pad thickness without backing plate	mm	12
3	Brake rotor	Diameter in mm	272
	Brake disc thickness	mm	10
4	Brake caliper piston	Diameter in mm	38

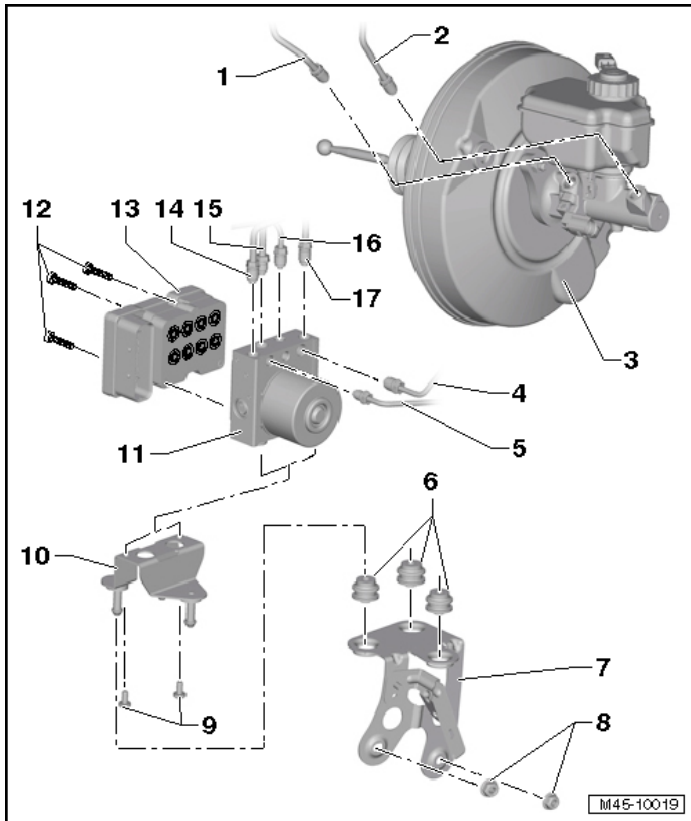
Rear Disc Brakes (CI 38)



Item	PR Number	1KD	
1	Brake caliper	CI 38 (15")	
2	Brake pad thickness without backing plate	mm	11
3	Brake rotor	Diameter in mm	255
	Brake rotor thickness	mm	10
	Brake rotor, wear limit	mm	8
4	Brake caliper piston	Diameter in mm	38

Anti-lock Brake System (ABS)

ABS Mark 70, Control Module and Hydraulic Unit Overview



1 - Brake Line

- 14 Nm
- Tube fitting with threads M12 x 1

2 - Brake Line

- 14 Nm
- Tube fitting with threads M12 x 1

3 - Brake Booster with Master Brake Cylinder

- Replace the complete brake booster if there are faults.

4 - Brake Line

- 14 Nm
- Tube fitting with threads M12 x 1
- To left rear brake caliper/brake cylinder

5 - Brake Line

- 14 Nm
- Tube fitting with threads M10 x 1
- To the right rear brake caliper/brake cylinder

6 - Rubber Insulation**7 - Bracket****8 - Nut**

- 8 Nm

9 - Bolt

- 8 Nm

10 - Bracket**11 - ABS Hydraulic Unit -N55-****12 - Bolt**

- 5.5 Nm
- Replace after removing

13 - ABS Control Module -J104-**14 - Brake Line**

- 14 Nm
- Tube fitting with threads M10 x 1
- ABS Hydraulic Unit -N55- for the master brake cylinder/primary piston circuit

15 - Brake Line

- 14 Nm
- Tube fitting with threads M10 x 1
- To the left front brake caliper

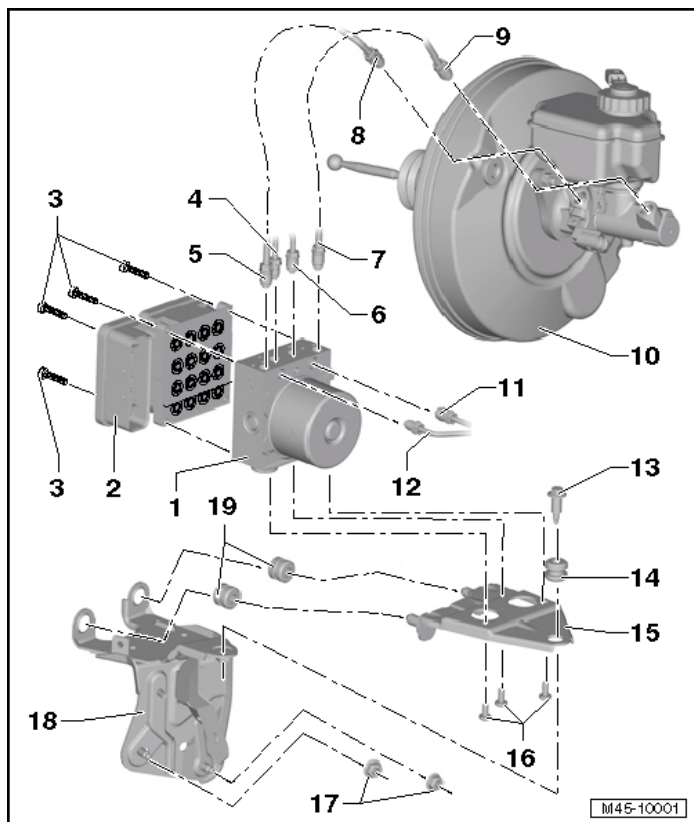
16 - Brake Line

- 14 Nm
- Tube fitting with threads M12 x 1
- To the right front brake caliper

17 - Brake Line

- 14 Nm
- Tube fitting with threads M12 x 1
- ABS Hydraulic Unit -N55- for the master brake cylinder/secondary piston circuit

ABS Mark 60 EC, Control Module and Hydraulic Unit Overview



1 - ABS Hydraulic Unit -N55-

2 - ABS Control Module -J104-

3 - Bolt

- 2 Nm \pm 0.8 Nm
- Replace after removing

4 - Brake Line

- 14 Nm
- 6.5 mm diameter and tube fitting with a M12 x 1 thread
- To the left front brake caliper

5 - Brake Line

- 14 Nm
- 6.5 mm diameter and tube fitting with a M12 x 1 thread
- ABS Hydraulic Unit -N55- for the master brake cylinder/primary piston circuit

6 - Brake Line

- 14 Nm
- 5.25 mm diameter and tube fitting with a M12 x 1 thread
- To the right front brake caliper

7 - Brake Line

- 14 Nm
- 6.5 mm diameter and tube fitting with a M12 x 1 thread
- ABS Hydraulic Unit -N55- for the master brake cylinder/secondary piston circuit

8 - Brake Line

- 14 Nm
- 6.5 mm diameter and tube fitting with a M12 x 1 thread
- Master brake cylinder/primary piston circuit to ABS Hydraulic Unit -N55-

9 - Brake Line

- 14 Nm
- 6.5 mm diameter and tube fitting with a M12 x 1 thread
- Master brake cylinder/secondary piston circuit to ABS Hydraulic Unit -N55-.

10 - Brake Booster with Master Brake Cylinder**11 - Brake Line**

- 14 Nm
- 5.25 mm diameter and tube fitting with a M12 x 1 thread
- To left rear brake caliper/brake cylinder

12 - Brake Line

- 14 Nm
- 5.25 mm diameter and tube fitting with a M12 x 1 thread
- To the right rear brake caliper/brake cylinder

13 - Hex Bolt

- 8 Nm

14 - Rubber Insulation**15 - Bracket****16 - Bolt**

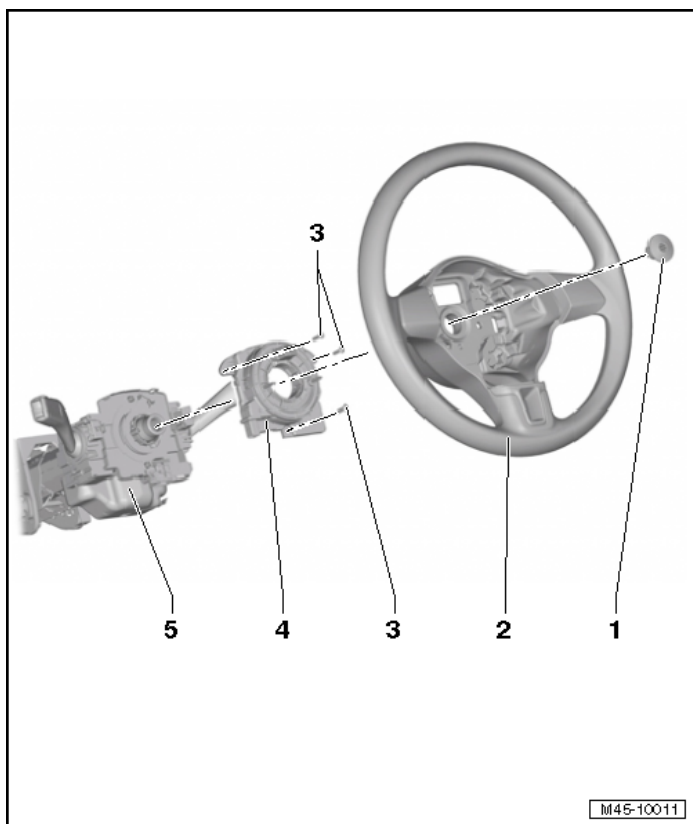
- 8 Nm

17 - Nut

- 8 Nm

18 - Console**19 - Rubber Insulation**

Steering Angle Sensor -G85- on Steering Column



1 - Bolt

- 30 Nm + 90° turn
- Replace after removing

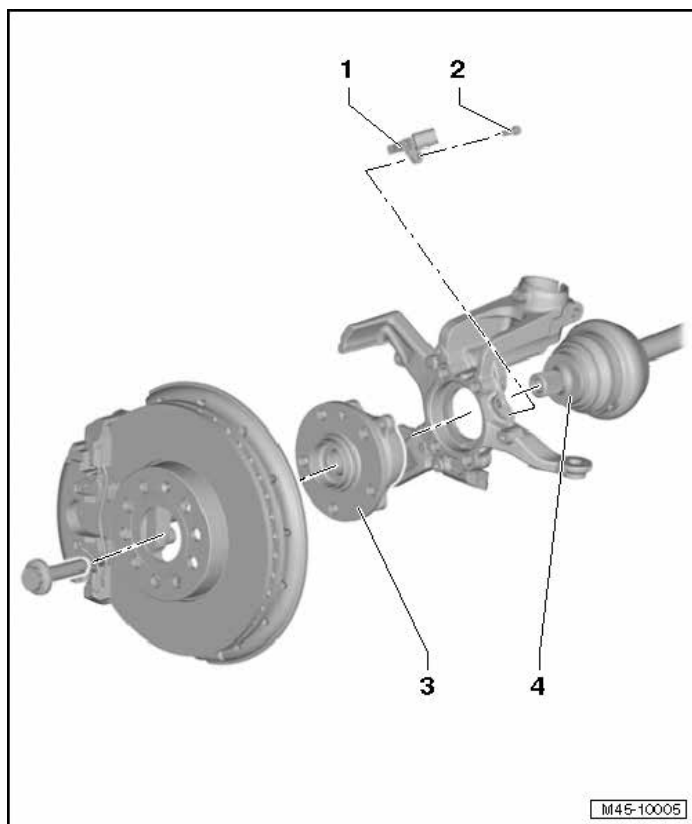
2 - Steering Wheel

3 - Bolt

4 - Steering Angle Sensor -G85-

5 - Steering Column

Speed Sensor -G45-/G47- on Front Axle



1 - Front Speed Sensor

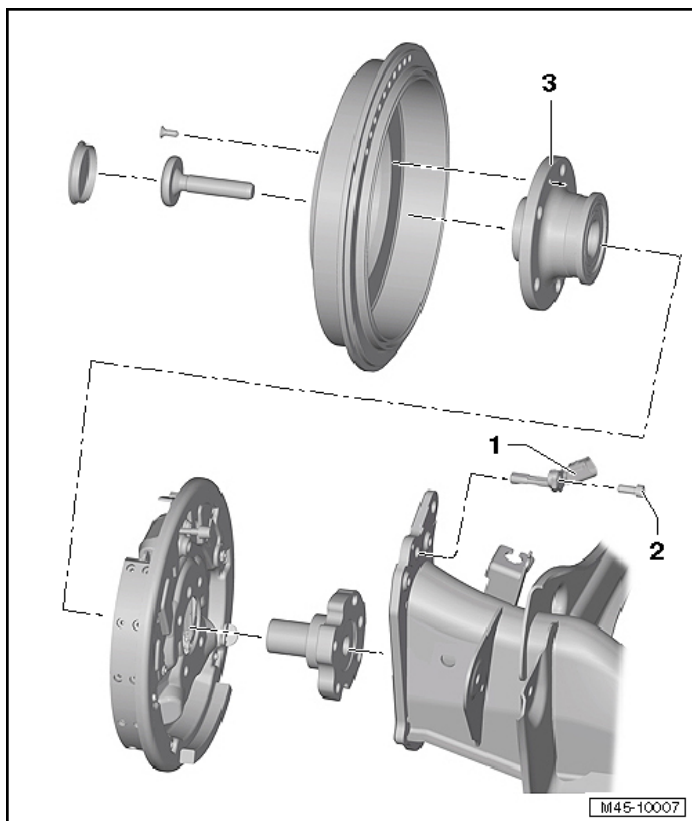
2 - Bolt

□ 8 Nm

3 - Wheel Bearing Unit

4 - Drive Axle

Speed Sensor -G44-/-G46- on Rear Axle Description and Operation, Twist Beam Rear Suspension with Drum Brake



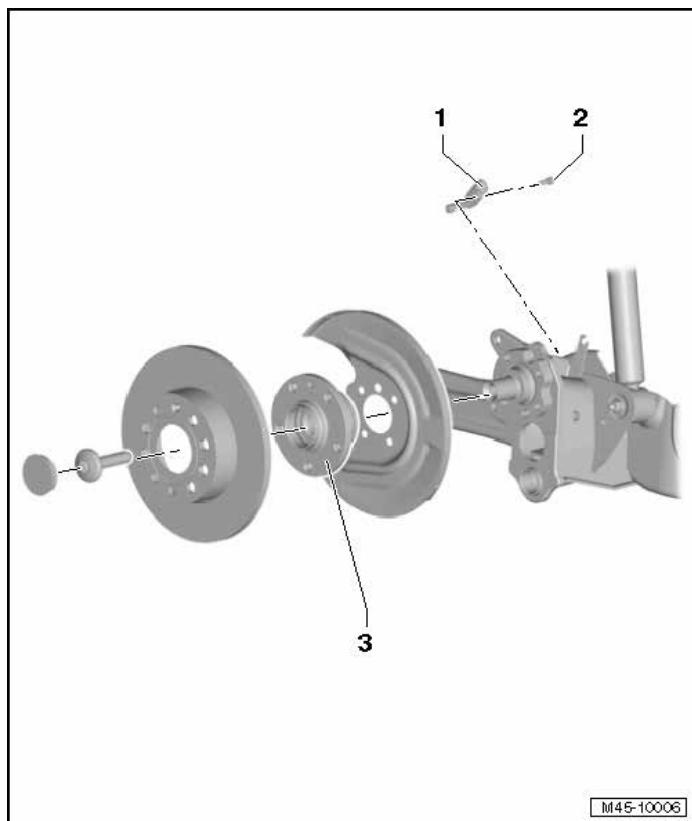
1 - Rear ABS Wheel Speed Sensor -G44-/-G46-

2 - Bolt

□ 8 Nm

3 - Wheel Bearing Unit

Speed Sensor -G44-/-G46- on Rear Axle Description and Operation, Twist Beam Rear Suspension with Drum Brake



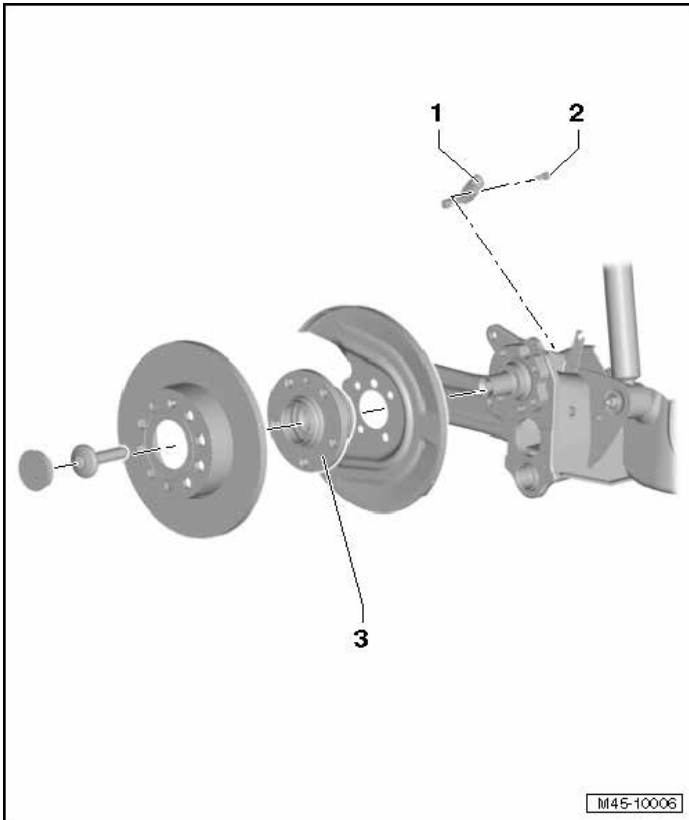
1 - Rear ABS Wheel Speed Sensor -G44-/-G46-

2 - Bolt

□ 8 Nm

3 - Wheel Bearing Unit

Speed Sensor -G44-/-G46- on Rear Axle Description and Operation, Multi-Link Rear Suspension



1 - Rear ABS Wheel Speed Sensor -G44-/-G46-

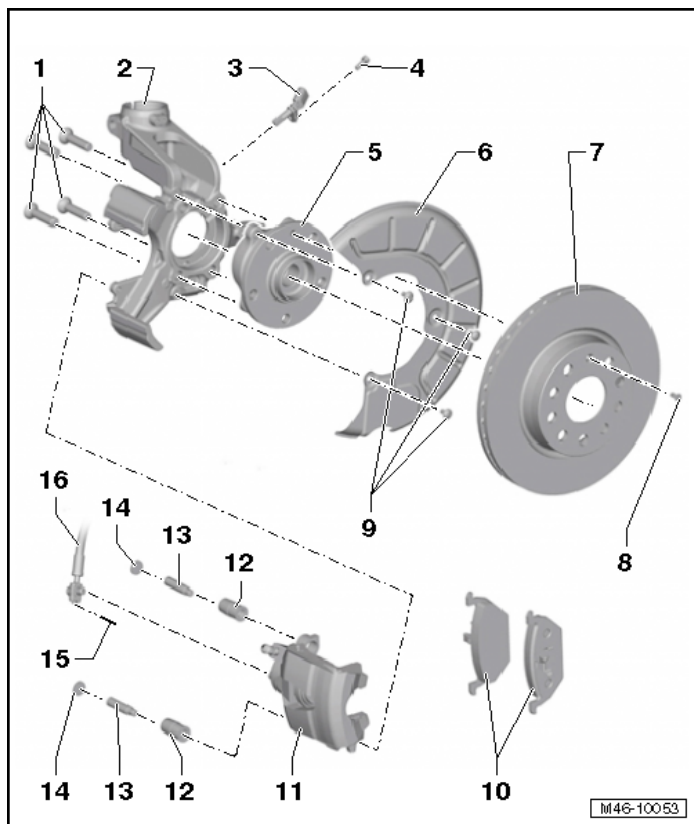
2 - Bolt

□ 8 Nm

3 - Wheel Bearing Unit

Mechanical Components

Brake Caliper Overview without Brake Pad Wear Display (FS III)



1 - Bolt

- 70 Nm + 90° turn
- Replace after removing

2 - Wheel Bearing Housing

3 - Front Speed Sensor

4 - Bolt

- 8 Nm

5 - Wheel Bearing Unit

6 - Cover Plate

7 - Brake Rotor

- Replace in pairs

8 - Bolt

- 8 Nm

9 - Bolt

- 12 Nm

10 - Brake Pads

11 - Brake Caliper

12 - Bearing Bushing

13 - Guide Pin

30 Nm

14 - Cap

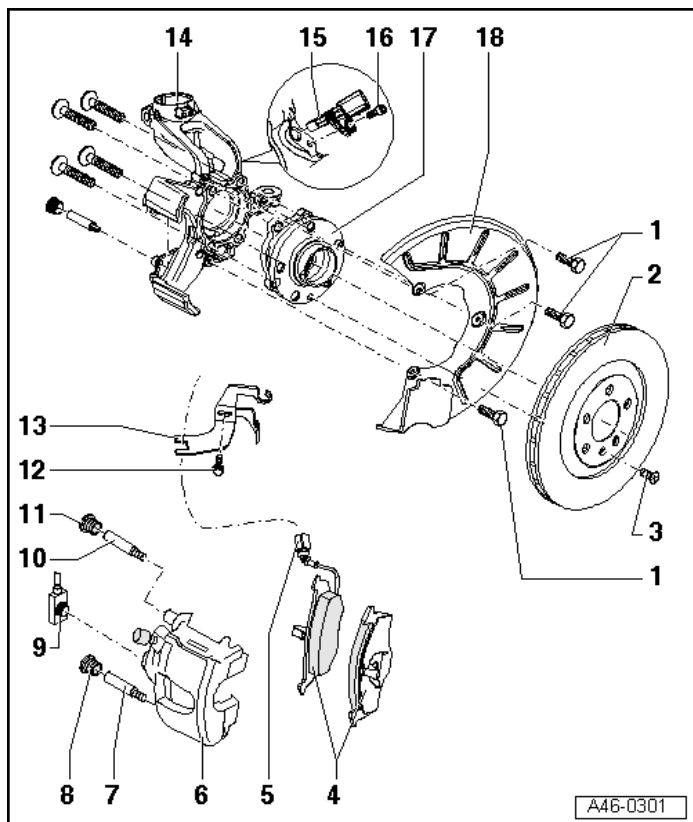
Remove

15 - Adapter Sleeve

16 - Brake Hose with Ring Connection and Banjo Fitting

35 Nm

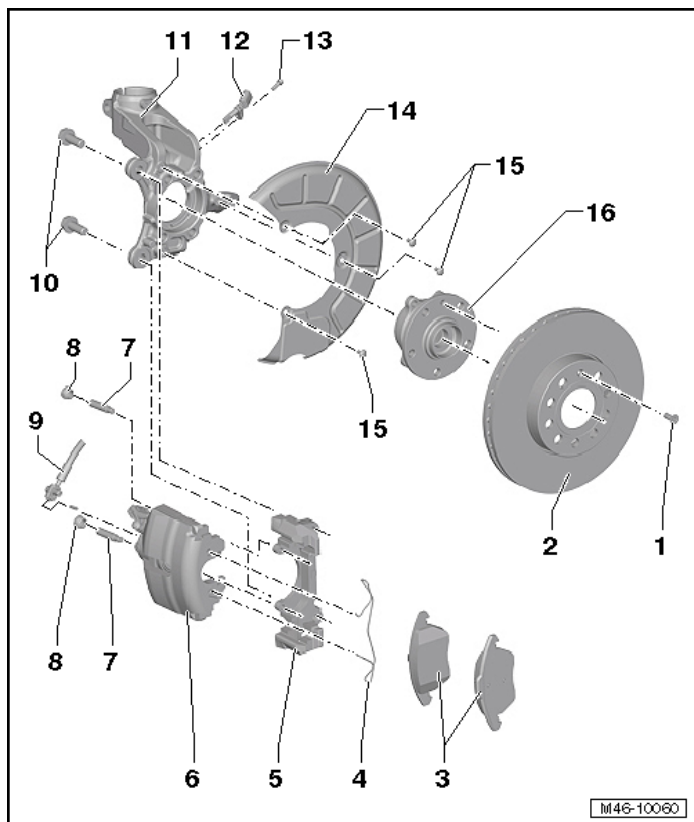
Brake Caliper Overview with Brake Pad Wear Display (FS III)



- 1 - Bolt**
 - 12 Nm
- 2 - Brake Rotor**
- 3 - Bolt**
 - 4 Nm
- 4 - Brake Pads**
- 5 - Harness Connector**
 - For Left Front Brake Pad Wear Sensor -G34-
- 6 - Brake Caliper**
- 7 - Guide Pin**
 - 30 Nm
- 8 - Cap**
 - Remove
- 9 - Brake Hose with Ring Connection and Banjo Fitting**
 - 35 Nm
- 10 - Guide Pin**
 - 30 Nm

11 - Cap Remove**12 - Bolt****13 - Bracket****14 - Wheel Bearing Housing****15 - Front Speed Sensor****16 - Bolt** 8 Nm**17 - Wheel Bearing/Wheel Bearing Unit****18 - Cover Plate**

Brake Caliper Overview without Brake Pad Wear Display (FN 3)



1 - Bolt

- 4 Nm

2 - Brake Rotor

3 - Brake Pads

4 - Spring

5 - Brake Carrier

6 - Brake Caliper

7 - Guide Pin

- 30 Nm

8 - Cap

9 - Brake Hose with Ring Connection and Banjo Fitting

- 35 Nm

10 - Bolt

- 200 Nm
- Clean if using again.

11 - Wheel Bearing Housing

12 - Front Speed Sensor

13 - Bolt

8 Nm

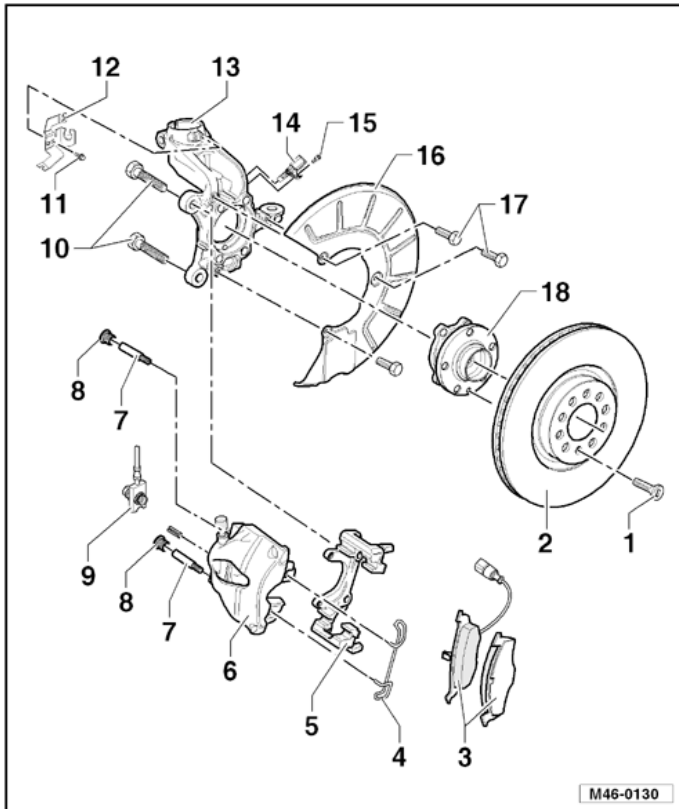
14 - Cover Plate

15 - Bolt

12 Nm

16 - Wheel Bearing Unit

Brake Caliper Overview with Brake Pad Wear Display (FN 3)



1 - Bolt

- 4 Nm

2 - Brake Rotor

3 - Brake Pads

4 - Spring

5 - Brake Carrier

6 - Brake Caliper

7 - Guide Pin

- 30 Nm

8 - Cap

- Remove

9 - Brake Hose with Ring Connection and Banjo Fitting

- 35 Nm

10 - Brake Booster with Master Brake Cylinder

11 - Bolt

- 200 Nm
- Clean if using again.

12 - Bracket

13 - Wheel Bearing Housing

14 - Front Speed Sensor

15 - Bolt

8 Nm

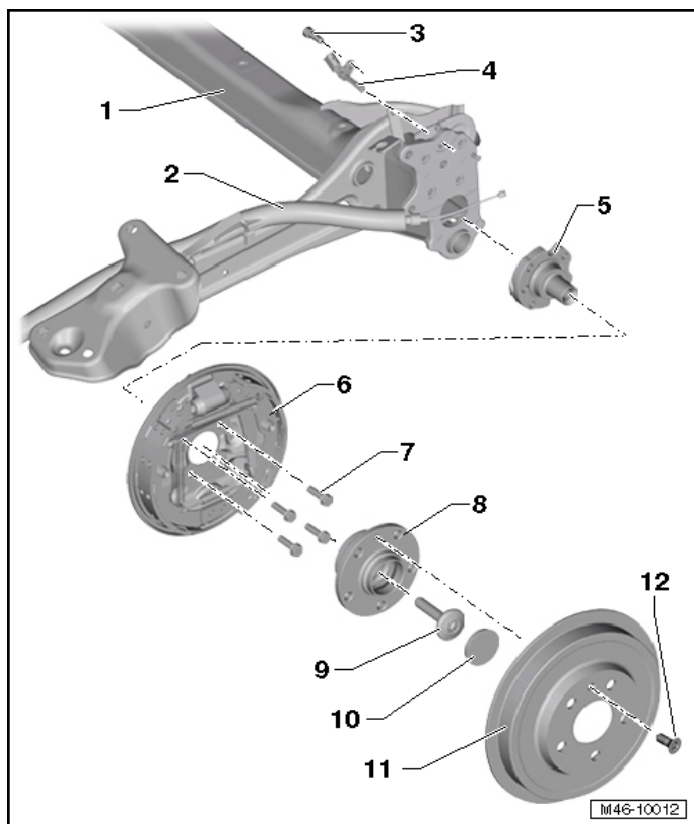
16 - Cover Plate

17 - Bolt

12 Nm

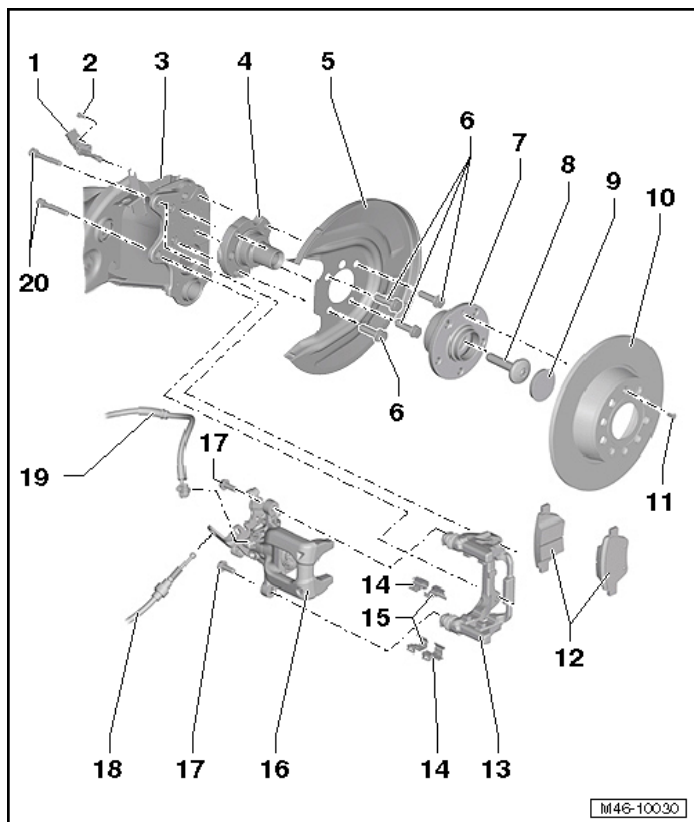
18 - Wheel Bearing/Wheel Bearing Unit

Drum Brake Overview with Twist Beam Suspension



- 1 - Axle Beam
- 2 - Brake Cable
- 3 - Bolt
 - 8 Nm
- 4 - Rear ABS Wheel Speed Sensor
- 5 - Stub Axle
- 6 - Brake Carrier with Brake Shoes
- 7 - Bolt
 - 30 Nm + 90° turn
 - Replace after removing
- 8 - Wheel Bearing Unit
- 9 - Bolt
 - Replace after removing
- 10 - Cover
- 11 - Brake Drum
- 12 - Bolt
 - 8 Nm

Disc Brakes (Bosch ZOH 38) with Twist Beam Suspension Overview



1 - Rear ABS Wheel Speed Sensor

2 - Bolt

8 Nm

3 - Axle Beam

4 - Stub Axle

5 - Brake Cover Plate

6 - Bolt

30 Nm + 90° turn

Replace after removing

7 - Wheel Bearing Unit

8 - Bolt

Replace after removing

9 - Cover

10 - Brake Rotor

11 - Bolt

8 Nm

12 - Brake Pads**13 - Brake Carrier with Different Guide Pins and Protective Cap****14 - Brake Pad Retaining Plate****15 - Brake Pad Retaining Plate****16 - Brake Caliper****17 - Bolt**

- 35 Nm
- Replace after removing

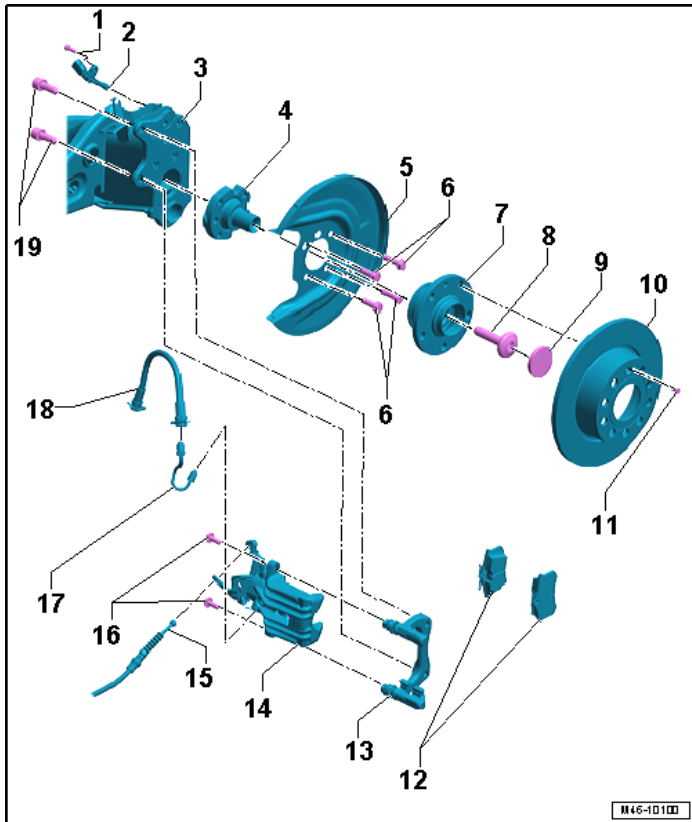
18 - Brake Cable**19 - Brake Hose**

- 35 Nm
- With banjo bolt and seals

20 - Bolt

- 90 Nm + 90° turn
- Replace after removing

Disc Brakes (CI 38) with Torsion Beam Overview



1 - Bolt

- 8 Nm

2 - Rear ABS Wheel Speed Sensor

3 - Axle Beam

4 - Stub Axle

5 - Brake Cover Plate

6 - Bolt

- 30 Nm + 90° turn
- Replace after removing

7 - Wheel Bearing Unit

8 - Bolt

- Replace after removing

9 - Cover

10 - Brake Rotor

11 - Bolt

- 8 Nm

12 - Brake Pads

13 - Brake Carrier with Different Guide Pins and Protective Cap

14 - Brake Caliper

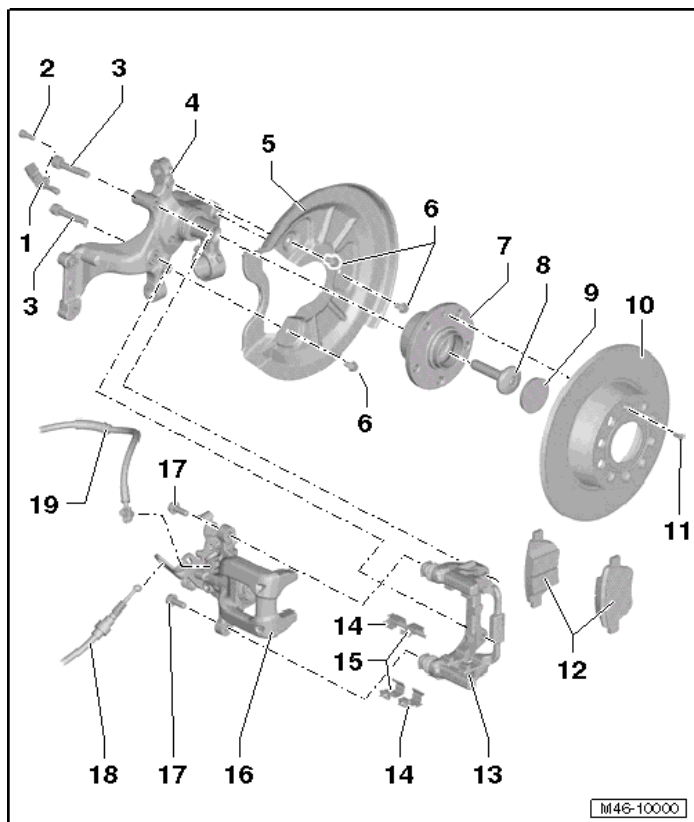
15 - Parking Brake Cable**16 - Brake Line**

- 14 Nm

17 - Brake Hose**18 - Bolt**

- 90 Nm + 90° turn
- Replace after removing

Disc Brakes (Bosch ZOH 38) with Multi-Link Rear Axle Overview



1 - Rear ABS Wheel Speed Sensor

2 - Bolt

8 Nm

3 - Bolt

90 Nm + 90° turn

Replace after removing

4 - Axle Beam

5 - Brake Cover Plate

6 - Bolt

12 Nm

M6 x 12

7 - Wheel Bearing Unit

8 - Bolt

Replace after removing

9 - Cover

10 - Brake Rotor

11 - Bolt

- 4 Nm

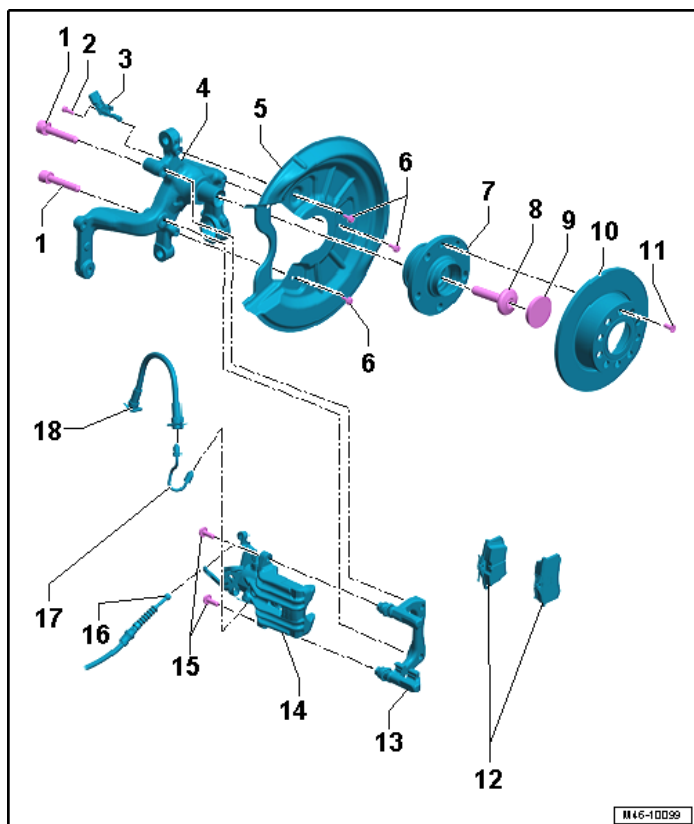
12 - Brake Pads**13 - Brake Carrier with Different Guide Pins and Protective Cap****14 - Brake Pad Retaining Plate****15 - Brake Pad Retaining Plate****16 - Brake Caliper****17 - Bolt**

- 35 Nm
- Replace after removing

18 - Brake Cable**19 - Brake Hose**

- 35 Nm
- With banjo bolt and seals

Disc Brakes (CI 38) Multi-Link Rear Axle Overview



1 - Bolt

- 90 Nm + 90° turn
- Replace after removing

2 - Bolt

- 8 Nm

3 - Rear ABS Wheel Speed Sensor

4 - Axle Beam

5 - Brake Cover Plate

6 - BBolt

- 12 Nm
- M6 x 12

7 - Wheel Bearing Unit

8 - Bolt

- Replace after removing

9 - Cover

10 - Brake Rotor

11 - Bolt

- 4 Nm

12 - Brake Pads

13 - Brake Carrier with Different Guide Pins and Protective Cap

14 - Brake Caliper

15 - Bolt

35 Nm

Replace after removing

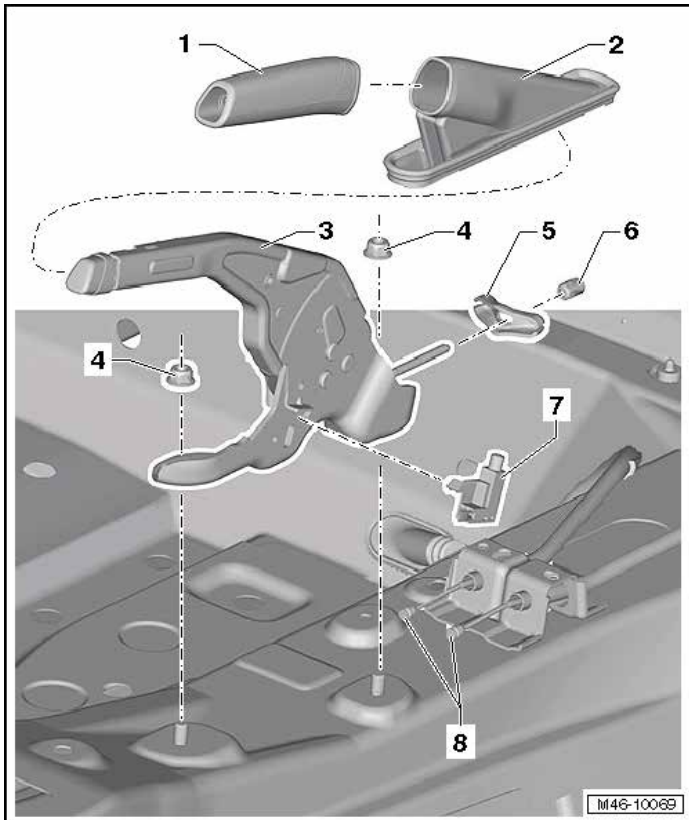
16 - Parking Brake Cable

17 - Brake Line

14 Nm

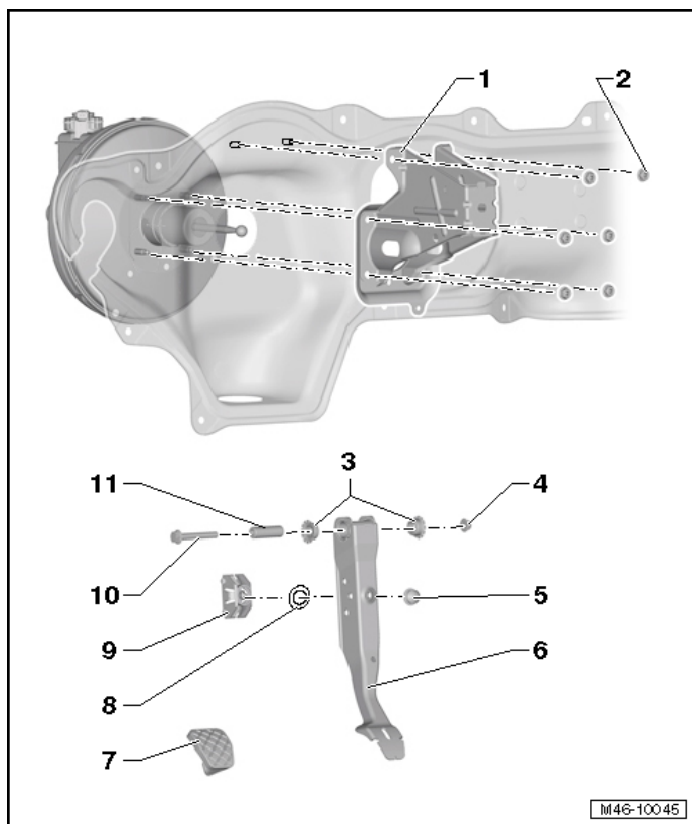
18 - Brake Hose

Parking Brake Overview



- 1 - Handle for Parking Brake Lever
- 2 - Trim for Parking Brake Lever
- 3 - Parking Brake Lever
- 4 - Nut
 - 20 Nm
- 5 - Compensator
- 6 - Adjusting Nut
- 7 - Parking Brake Indicator Lamp Switch -F9-
- 8 - Brake Cables

Brake Pedal Overview



1 - Bracket

2 - Nut

20 Nm

Replace after removing

3 - Bearing Bushing

4 - Nut

25 Nm

Replace after removing

5 - Stop Buffer

6 - Brake Pedal

7 - Cover

8 - Bearing Shell

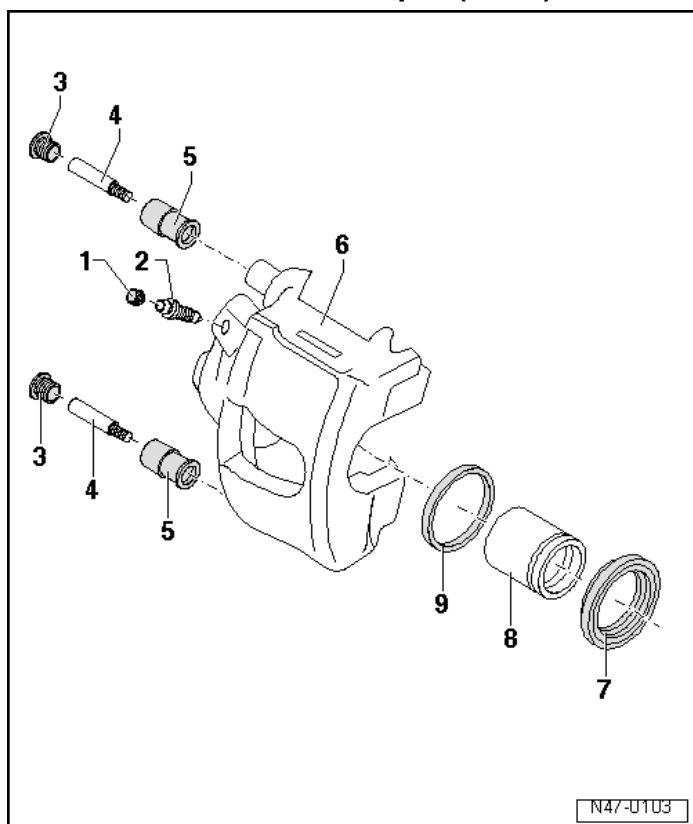
9 - Mount

10 - Bolt

11 - Bearing Pin

Hydraulic Components

Front Brake Caliper (FS III)



1 - Dust Cap

2 - Bleeder Valve

10 Nm

Apply a thin coat of Assembly Paste -G 052 150 A2- to the threads before installing.

3 - Caps

4 - Guide Pin

30 Nm

5 - Bearing Bushing

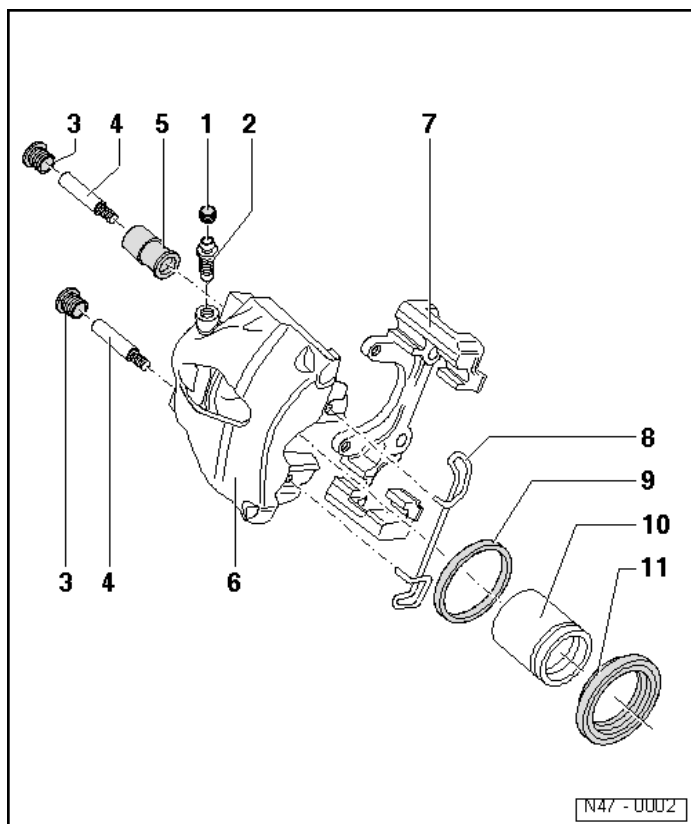
6 - Brake Caliper

7 - Cap

8 - Piston

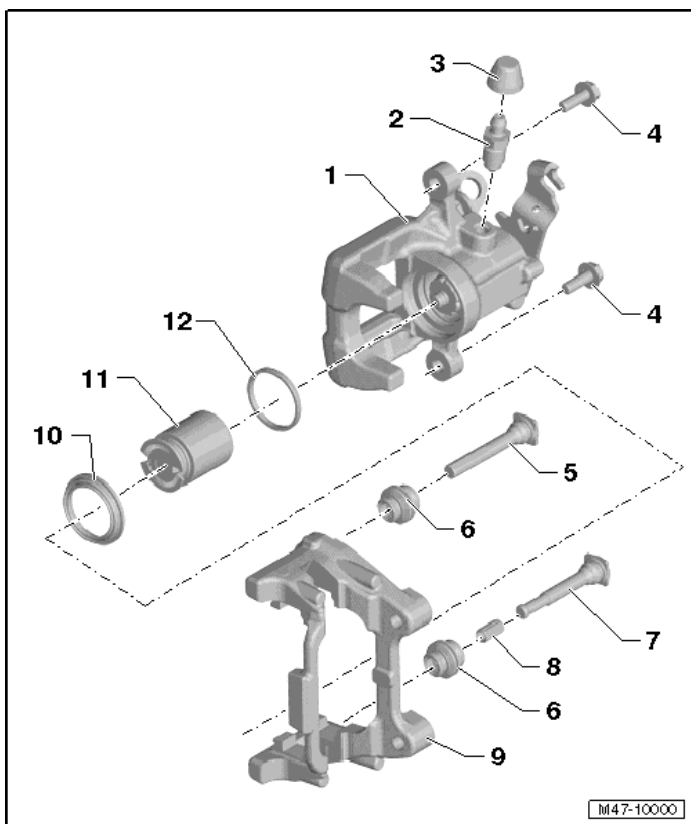
9 - Seal

Front Brake Caliper Overview (FN 3)



- 1 - Dust Cap
- 2 - Bleeder Valve
 - 10 Nm
 - Apply a thin coat of Assembly Paste -G 052 150 A2- to the threads before installing.
- 3 - Caps
- 4 - Guide Pin
 - 30 Nm
- 5 - Bearing Bushing
- 6 - Brake Caliper
- 7 - Brake Carrier
- 8 - Spring
- 9 - Seal
- 10 - Piston
- 11 - Cap

Rear Brake Caliper Overview (Bosch ZOH 38)



1 - Brake Caliper with Parking Brake Cable Lever

2 - Bleeder Valve

- 10 Nm
- Apply a thin coat of Assembly Paste -G 052 150 A2- to the threads before installing.

3 - Dust Cap

4 - Bolt

- 35 Nm
- Replace after removing

5 - Upper Guide Pins

6 - Cap

7 - Lower Guide Pins

8 - Guide Grommet

9 - Brake Carrier

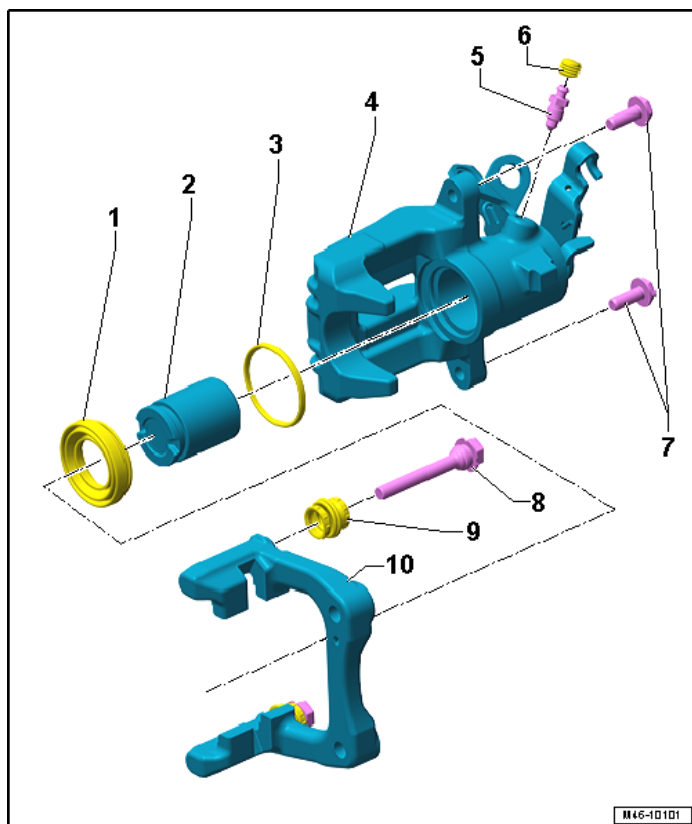
10 - Cap

11 - Piston with Automatic Adjustment

- Apply thin coat of assembly paste -G 052 150 A2- to the piston.

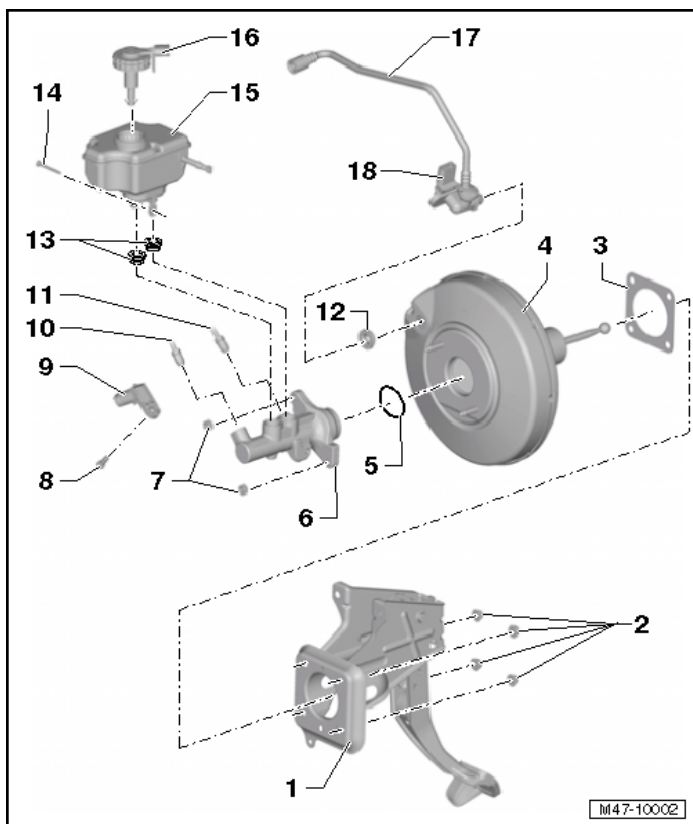
12 - Seal

Rear Brake Caliper Overview (CI 38)



- 1 - Cap
- 2 - Piston with Automatic Adjustment
- 3 - Seal
- 4 - Brake Caliper
- 5 - Bleeder Valve
 - 10 Nm
 - Apply a thin coat of Assembly Paste -G 052 150 A2- to the threads before installing.
- 6 - Dust Cap
- 7 - Bolt
 - 35 Nm
 - Replace after removing
- 8 - Guide Pin
- 9 - Cap
- 10 - Brake Carrier

Brake Booster/Master Cylinder Overview



1 - Pedal Assembly

2 - Nut

- 25 Nm
- Replace after removing

3 - Seal

4 - Brake Booster

5 - Seal

6 - Brake Master Cylinder

7 - Nut

- 25 Nm
- Replace after removing

8 - Bolt

- 5 Nm

9 - Brake Lamp Switch -F-

10 - Brake Line

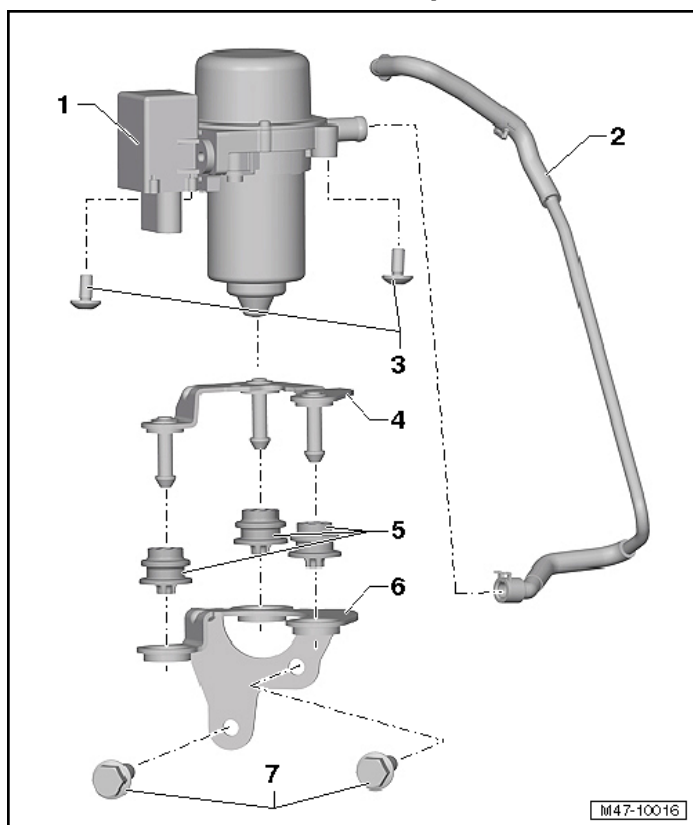
- 14 Nm
- 6.5 mm diameter and tube fitting with a M12 x 1 thread
- Master brake cylinder/secondary piston circuit to ABS Hydraulic Unit -N55-

11 - Brake Line

- 14 Nm
- 6.5 mm diameter and tube fitting with a M12 x 1 thread
- Master brake cylinder/primary piston circuit to ABS Hydraulic Unit
-N55-

12 - Sealing Plug**13 - Sealing Plug****14 - Mounting Pin****15 - Brake Fluid Reservoir****16 - Cap****17 - Vacuum Line****18 - Vacuum Sensor -G608-**

Electric Vacuum Pump Overview



1 - Brake System Vacuum Pump -V192-

2 - Vacuum Line

3 - Bolt

8 Nm

4 - Bracket

5 - Rubber Insulation

6 - Bracket

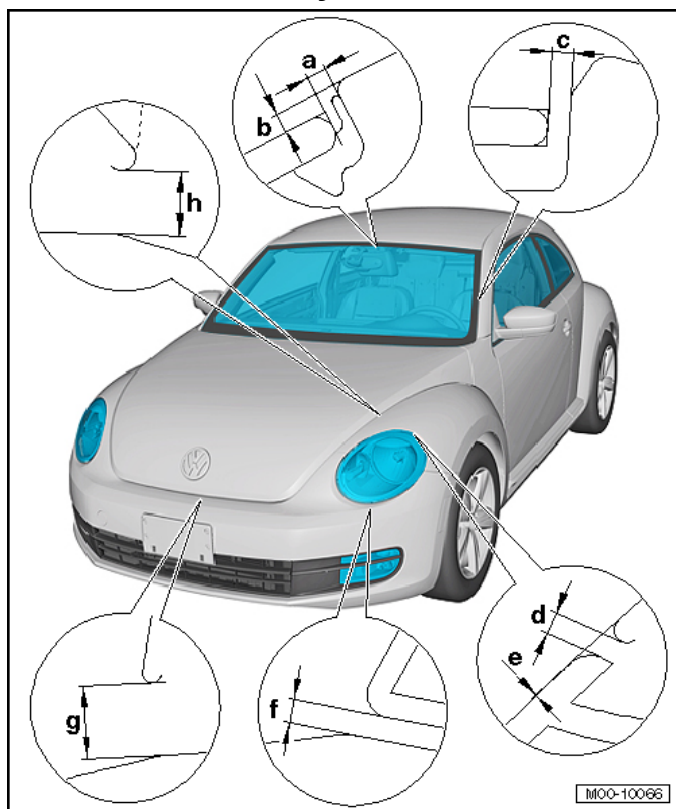
7 - Bolt

25 Nm

BODY

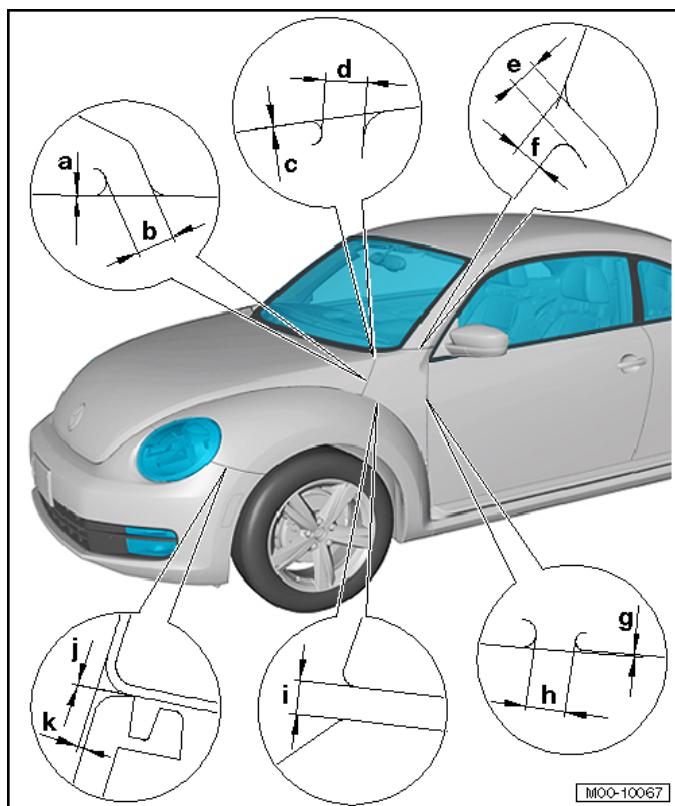
Air Gap Body Dimensions

Body, Front



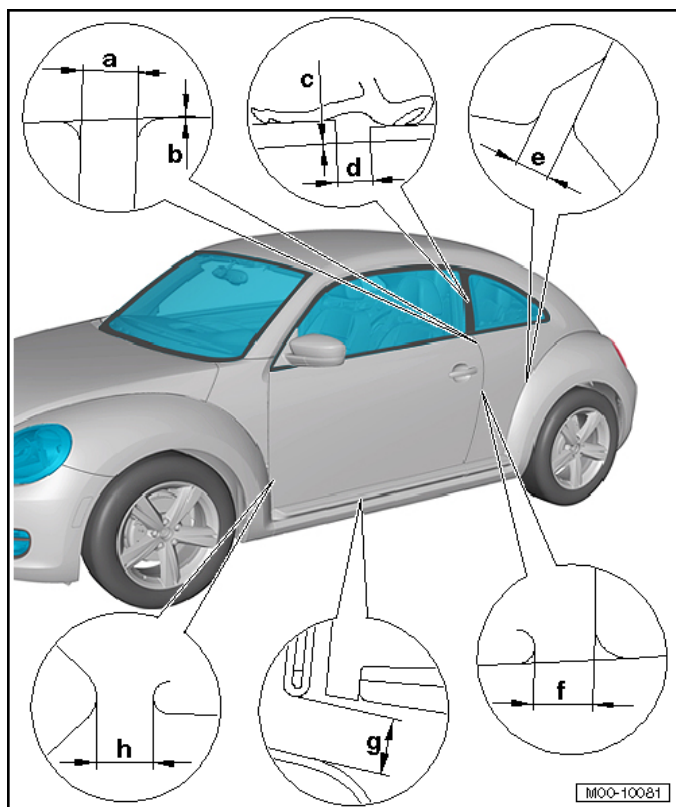
Component	Gap (mm)
a	2.5 ± 0.5
b	2.5 ± 0.5
c	2.5 ± 1.0
d	2.0 ± 0.5
e	0.0 ± 0.5
f	2.5 ± 0.5
g	8.5 ± 0.5
h	5.0 ± 0.5

Body, Center



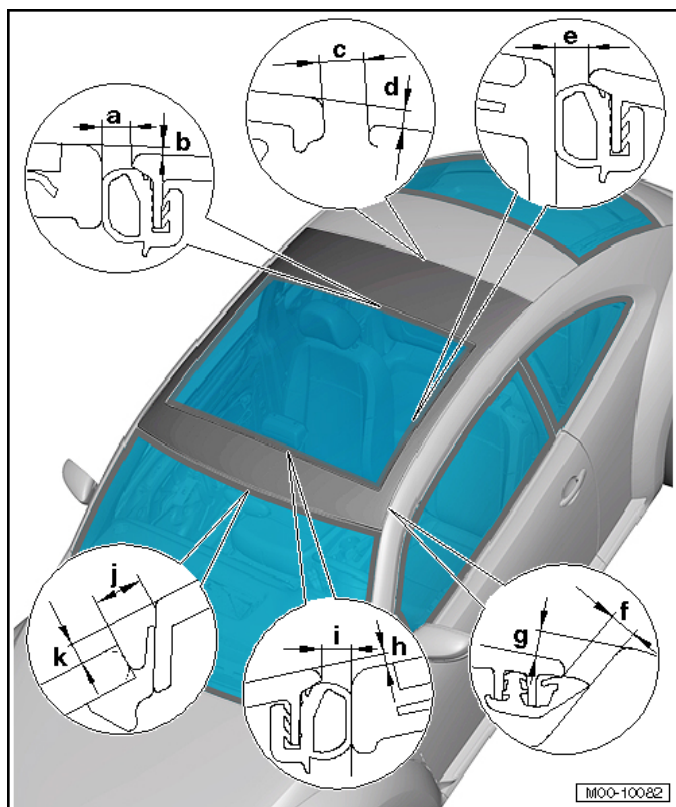
Component	Gap (mm)
a	0.0 ± 0.5
b	3.1 ± 0.5
c	0.0 ± 0.5
d	4.0 ± 0.5
e	2.0 ± 1.0
f	2.2 ± 0.5
g	0.0 ± 1.0
h	4.3 ± 0.5
i	5.0 ± 0.5
j	0.0 ± 0.5
k	0.3 ± 0.5

Body, Center (cont'd)



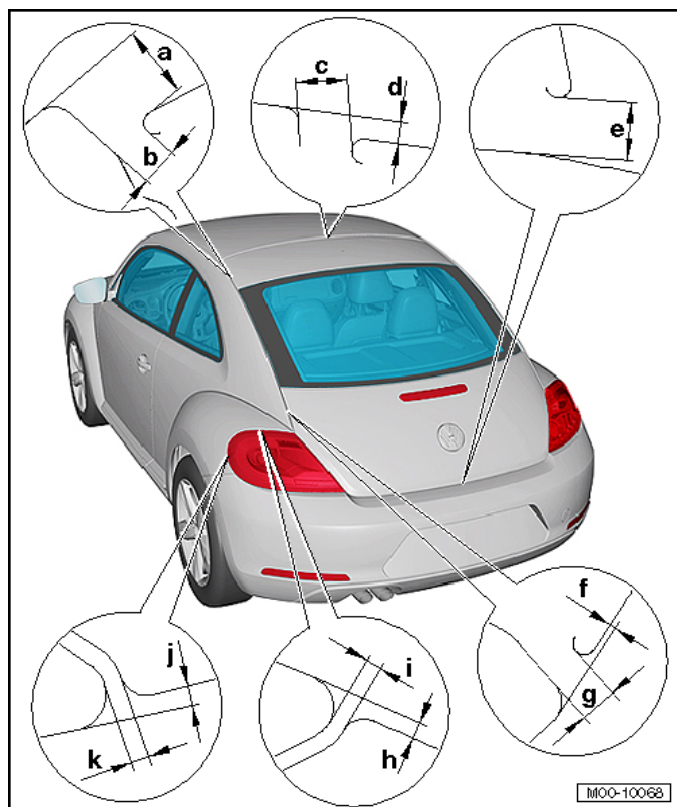
Component	Gap (mm)
a	3.5 ± 0.5
b	0.0 ± 1.0
c	0.0 ± 1.0
d	7.0 ± 1.0
e	4.0 ± 0.5
f	3.5 ± 0.5
g	4.4 ± 0.8
h	3.5 ± 0.5

Body, Center (cont'd)



Component	Gap (mm)
a	4.2 ± 1.5
b	1.0 ± 1.0
c	5.0 ± 0.5
d	2.0 ± 1.5
e	4.2 ± 1.3
f	4.2 ± 1.5
g	3.7 ± 1.0
h	1.7 ± 1.5
i	4.2 ± 1.5
j	5.8 ± 0.5
k	2.4 ± 0.5

Body, Rear

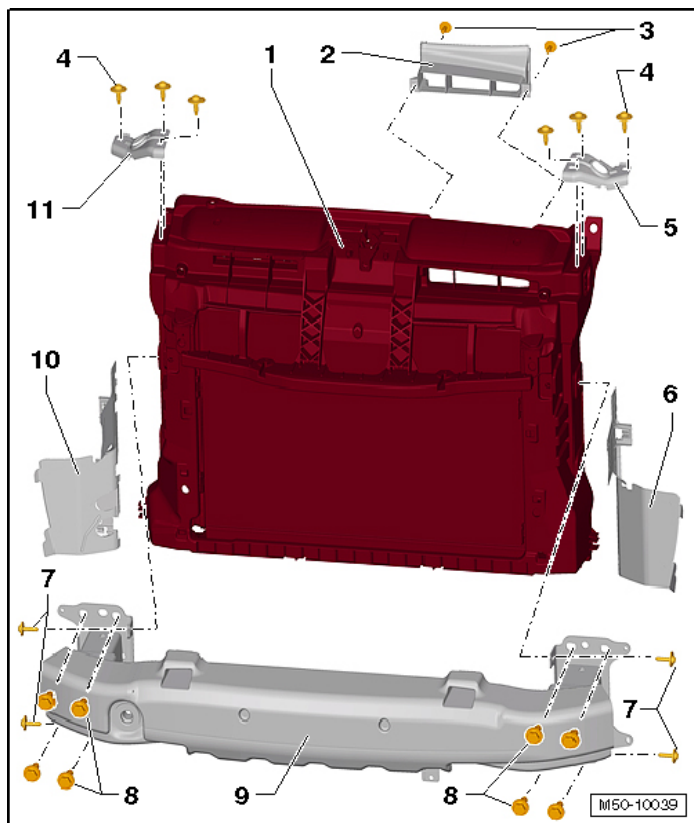


Component	Gap (mm)
a	7.5 ± 0.5
b	4.0 ± 0.5
c	5.0 ± 0.5
d	2.0 ± 1.5
e	5.5 ± 0.5
f	0.6 ± 0.5
g	4.0 ± 0.5
h	1.0 ± 0.5
i	1.0 ± 0.5
j	1.0 ± 0.5
k	1.0 ± 0.5

Body Exterior

Body Front

Lock Carrier Overview, Sedan



1 - Lock Carrier with Attachments

2 - Air Guide Channel

3 - Bolt

2 Nm

4 - Bolt

8 Nm

5 - Bracket

Left

6 - Air Ducts

Left

7 - Bolt

8 Nm

8 - Bolt

60 Nm

9 - Bumper Carrier

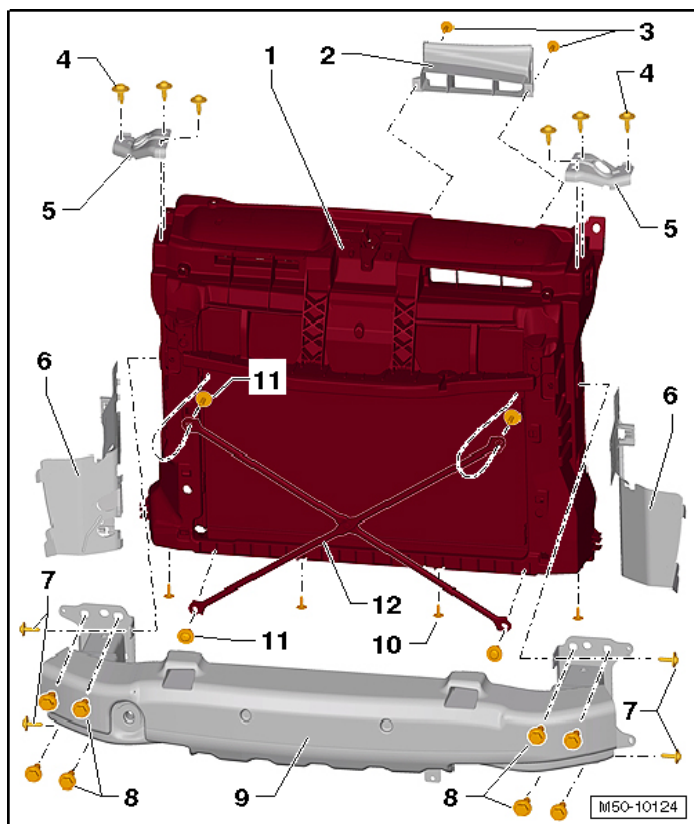
10 - Air Ducts

Right

11 - Bracket

Right

Lock Carrier Overview, Convertible



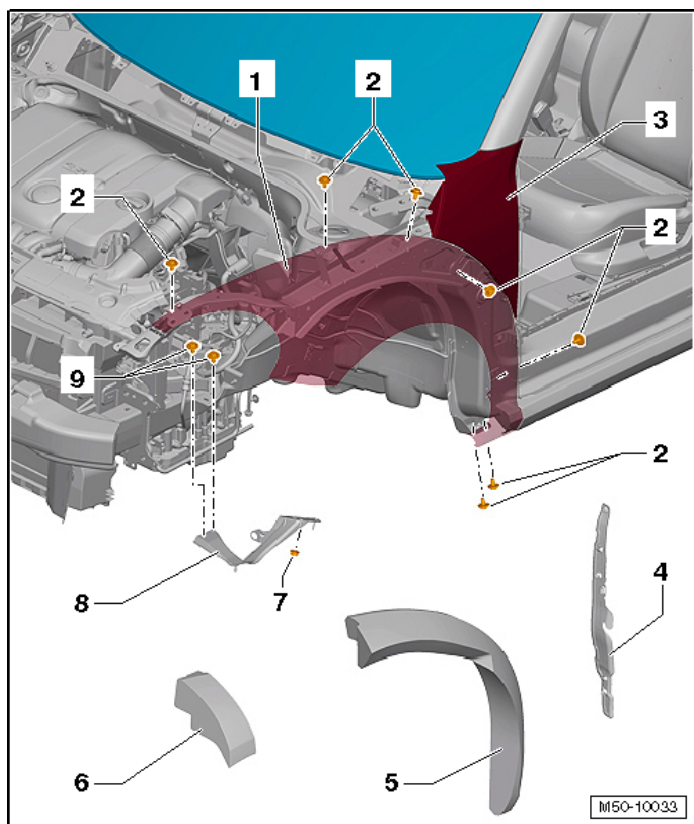
- 1 - Lock Carrier with Attachments**
- 2 - Air Guide Channel**
- 3 - Bolt**
 - 2 Nm
- 4 - Bolt**
 - 8 Nm
- 5 - Bracket**
 - Left
- 6 - Air Ducts**
 - Left
- 7 - Bolt**
 - 8 Nm
- 8 - Bolt**
 - 60 Nm
- 9 - Bumper Carrier**
- 10 - Bolt**
 - Refer to Noise Insulation Overview in Exterior Equipment

11 - Bolt

8 Nm

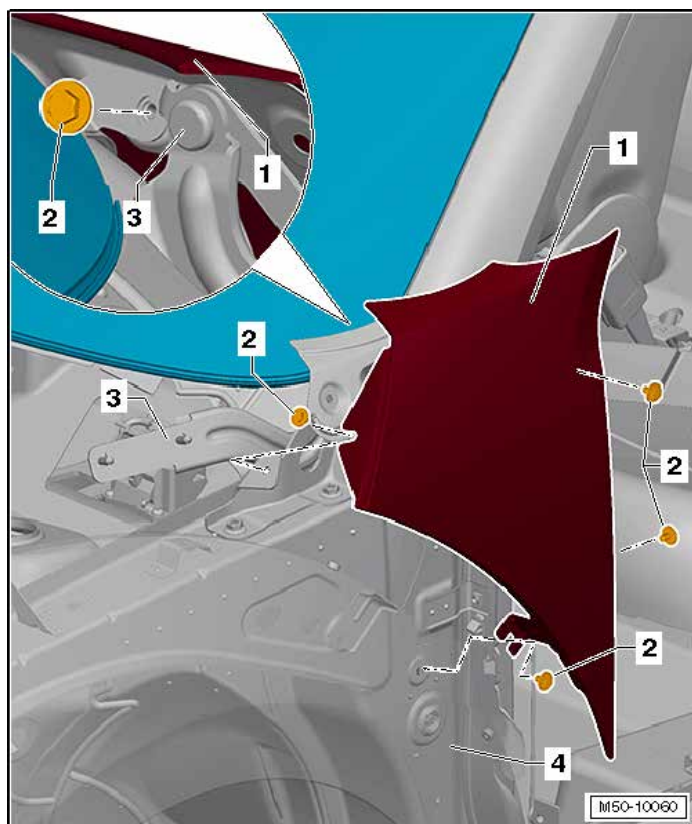
12 - Crossbrace

Fender Overview



- 1 - Front Fender
- 2 - Bolt
 - 6 Nm
- 3 - Front Upper Fender
- 4 - Front Fender End Plate
- 5 - Brace Noise Insulation
- 6 - Front Fender Noise Insulation
- 7 - Nut
 - 6 Nm
- 8 - Lower Brace
- 9 - Bolt
 - 6 Nm

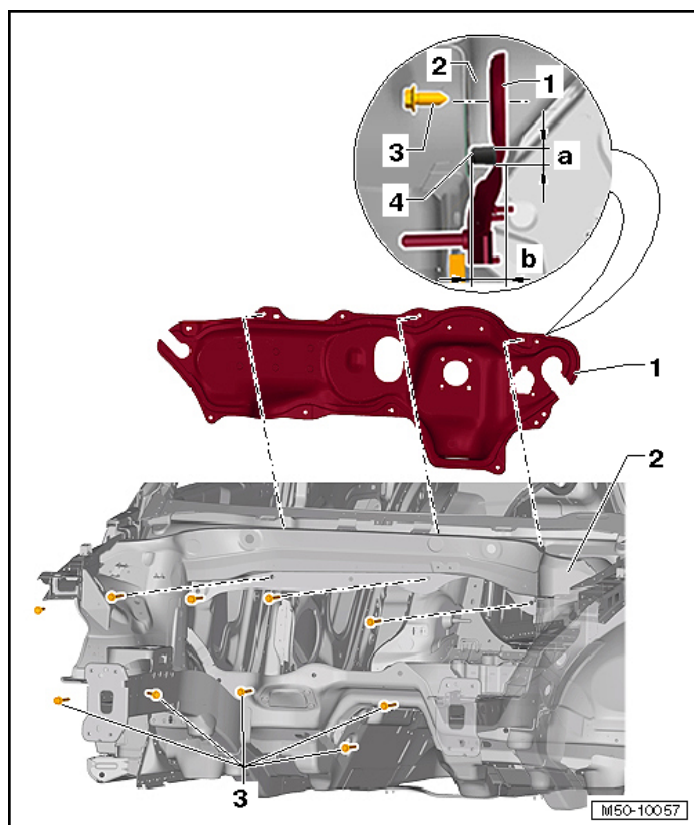
Front Upper Fender



Body

- 1 - Front Upper Fender
- 2 - Bolt
 - 6 Nm
- 3 - Hood Hinge
- 4 - Front Fender

Bulkhead Overview

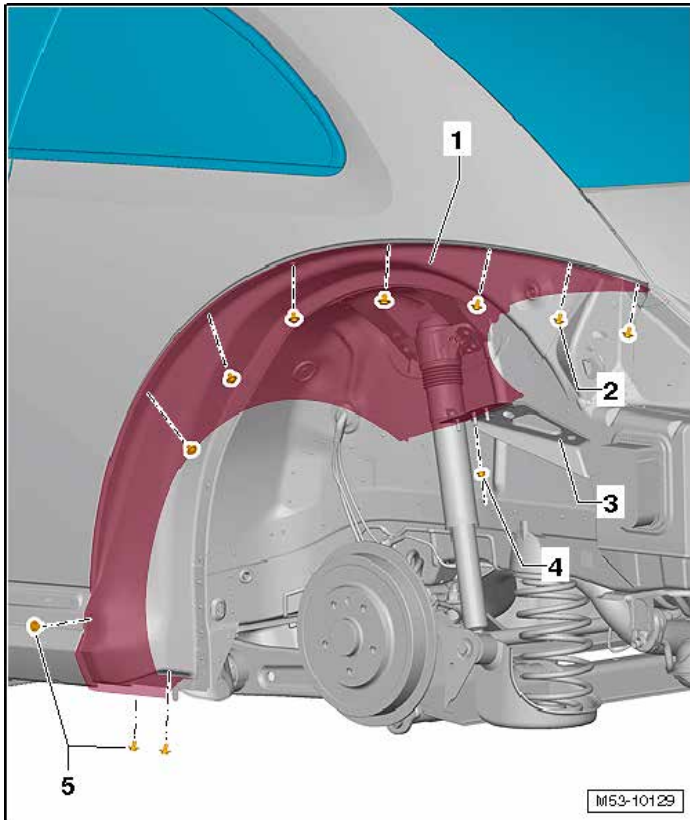


- 1 - Bulkhead
- 2 - Body Flange
- 3 - PUR Adhesive Sealant
- 4 - Bolt

□ 25 Nm

Body Rear

Rear Fender Overview



Body

1 - Rear Fender

2 - Bolt

- M4: 3 Nm
- M6: 8 Nm
- Do not interchange

3 - Fender Brace

4 - Nut

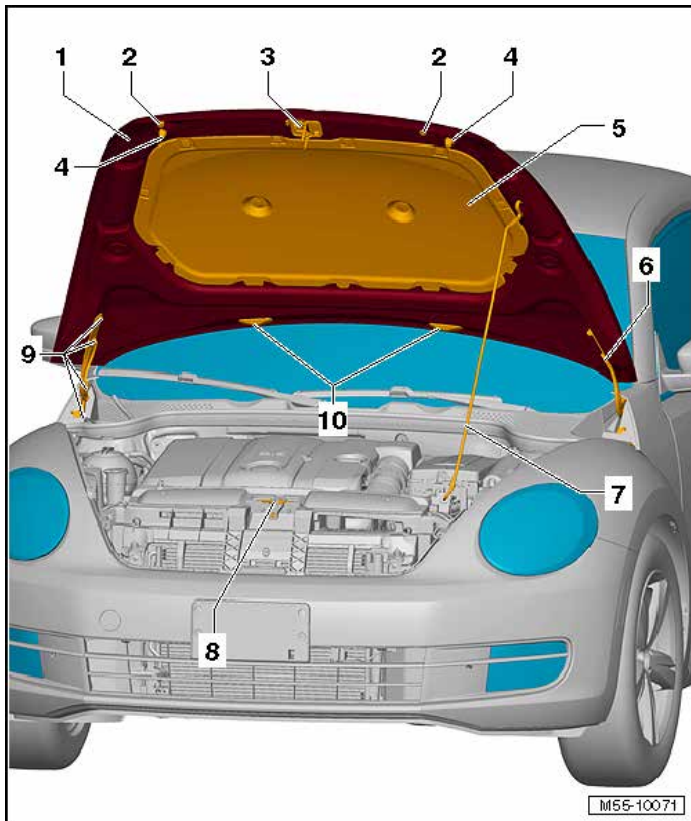
- 8 Nm

5 - Bolt

- 8 Nm

Hood, Lids

Hood Overview



1 - Hood

2 - Rubber Stop

- M4: 3 Nm
- M6: 8 Nm
- Do not interchange

3 - Hood Catch

4 - Adjusting Buffer

5 - Insulation

6 - Hinge

7 - Support Rod

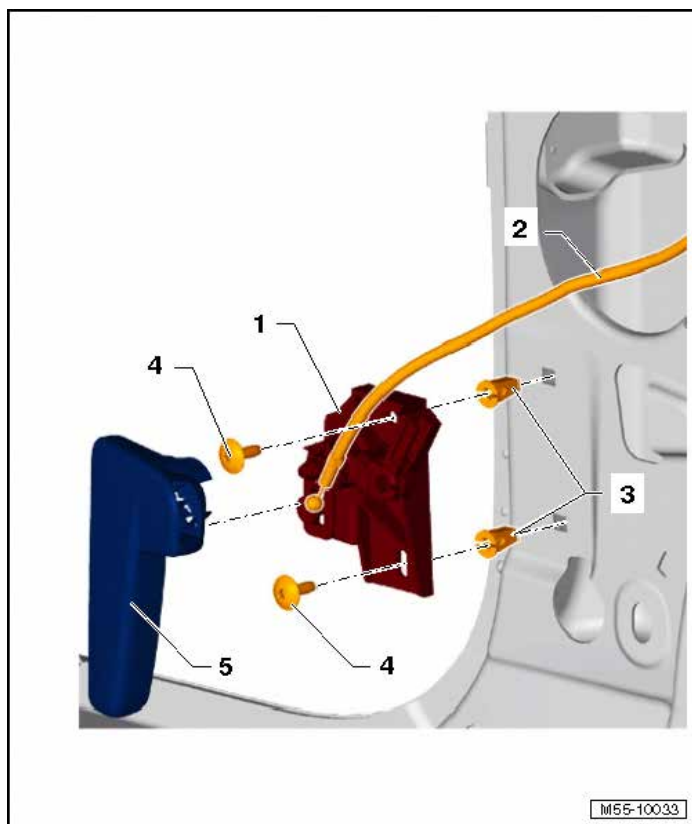
8 - Hood Latch

9 - Bolt

- 20 Nm

10 - Spray Nozzles

Release Lever Overview



Body

1 - Bracket

2 - Release Cable

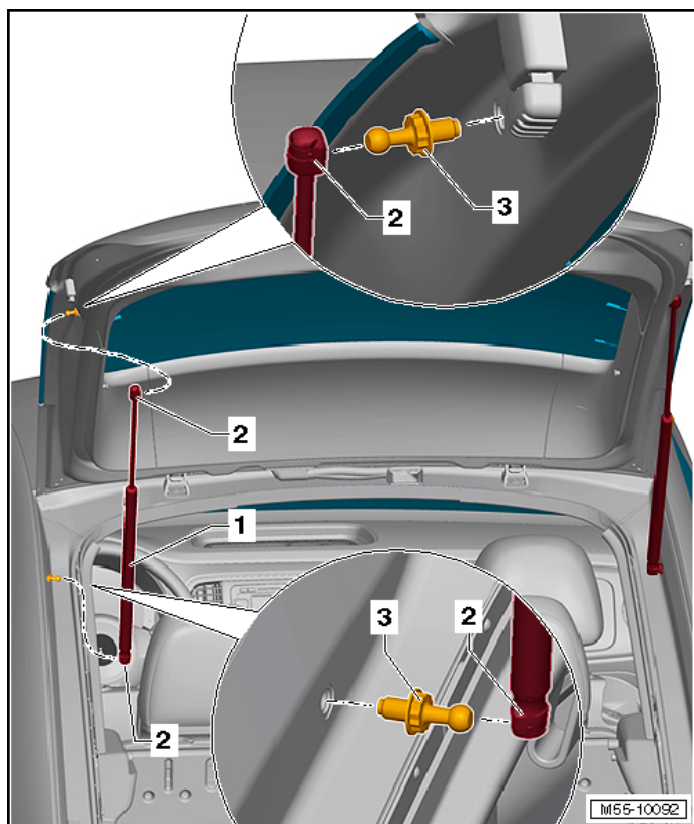
3 - Expanding Nut

4 - Bolt

□ 1.5 Nm

5 - Lever

Rear Lid Overview, Sedan, Gas-Filled Strut



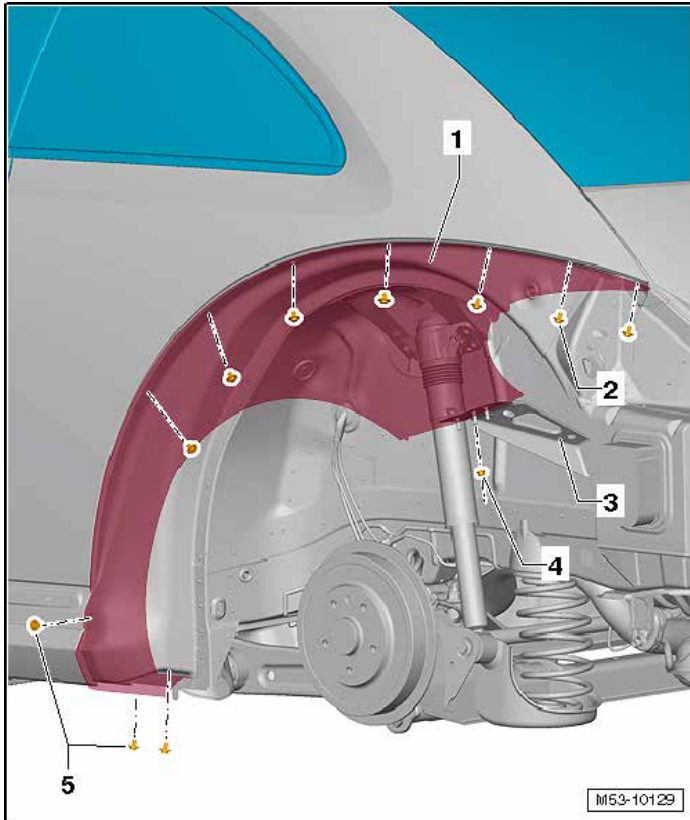
1 - Gas-Filled Strut

2 - Ball Socket

3 - Ball Stud

- 20 Nm + 45° turn
- Always replace

Hood Overview



Body

1 - Rear Fender

2 - Bolt

- M4: 3 Nm
- M6: 8 Nm
- Do not interchange

3 - Fender Brace

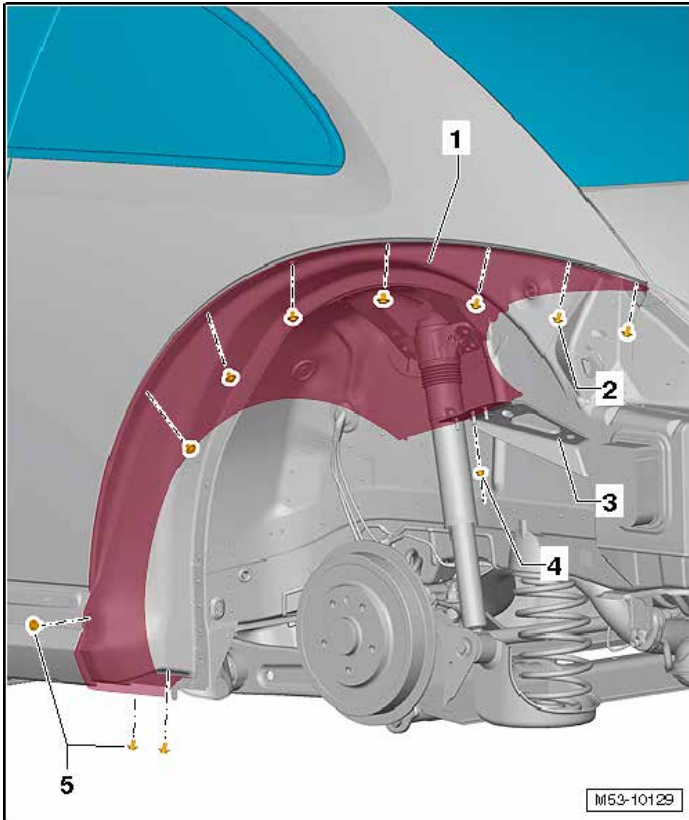
4 - Nut

- 8 Nm

5 - Bolt

- 8 Nm

Hood Overview



1 - Rear Fender

2 - Bolt

- M4: 3 Nm
- M6: 8 Nm
- Do not interchange

3 - Fender Brace

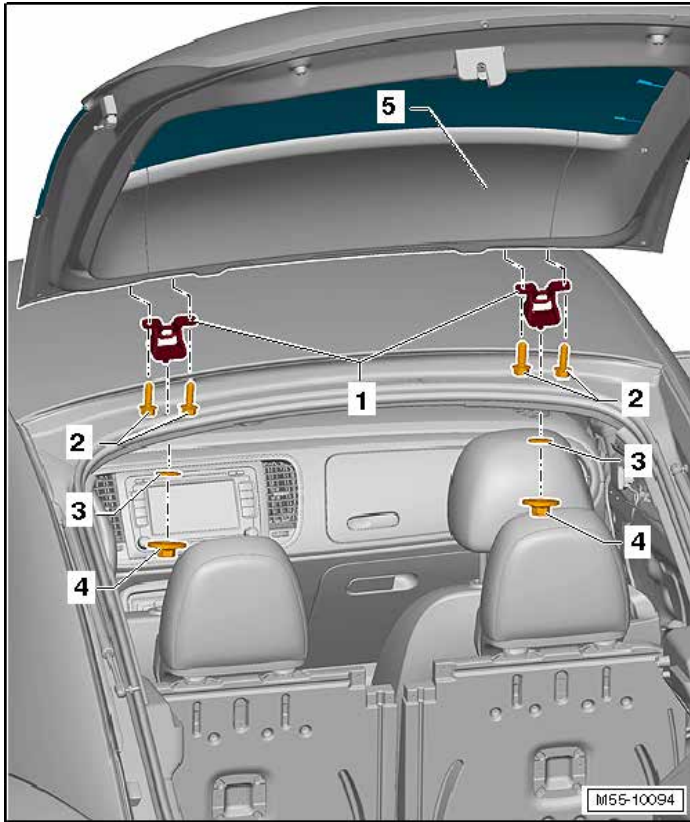
4 - Nut

- 8 Nm

5 - Bolt

- 8 Nm

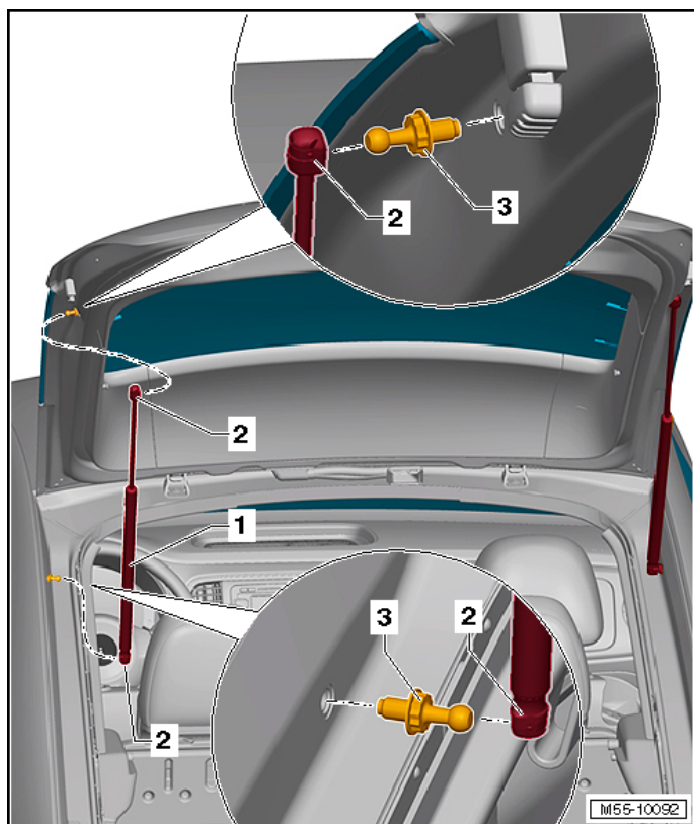
Hinge Overview



Body

- 1 - Hinge
- 2 - Bolt
 - 10 Nm
- 3 - Washer
- 4 - Nut
 - 24 Nm
- 5 - Rear Lid

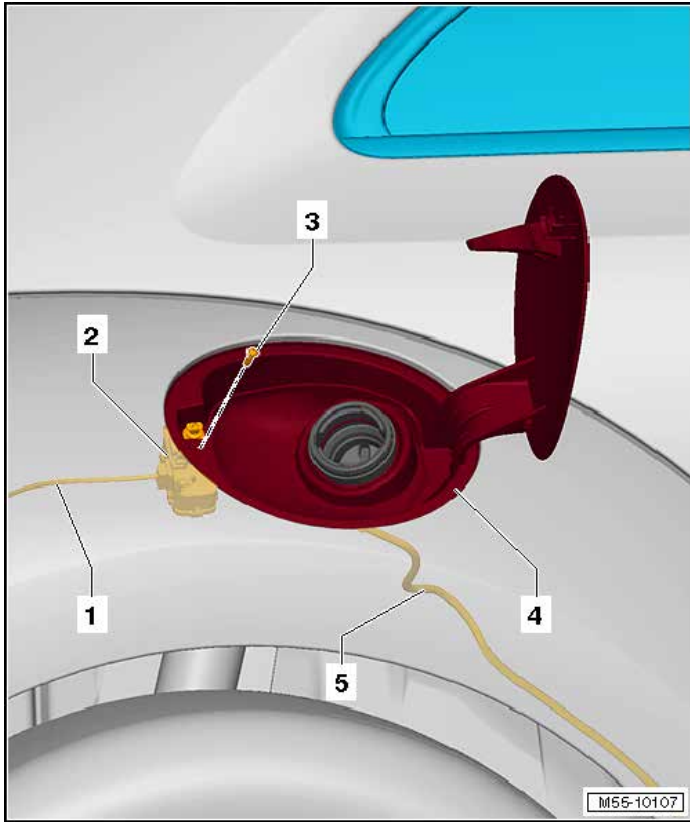
Rear Lid Overview, Convertible, Hinge



The gas-filled strut is not shown in the illustration.

- 1 - Rear Lid
- 2 - Centering Pins
- 3 - Bolt
 - 24 Nm
- 4 - Sealing Washer
- 5 - Hinge
- 6 - Nut
 - 24 Nm
- 7 - Centering Pin Nut
 - 4 Nm
- 8 - Rubber Stop

Fuel Filler Door Unit Overview

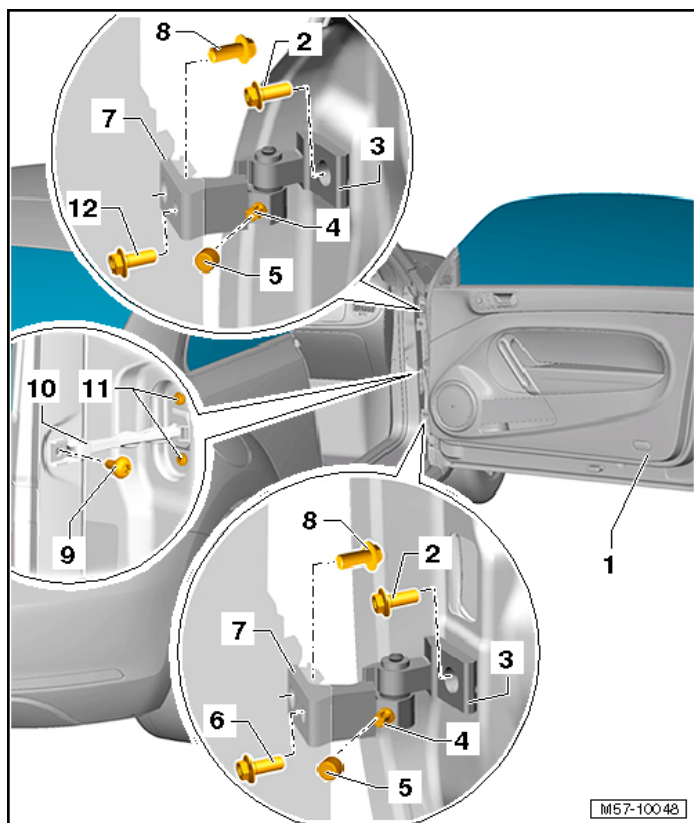


Body

- 1 - Connector
- 2 - Fuel Filler Door Unlock Motor -V155-
- 3 - Bolt
 - 1.5 Nm
- 4 - Fuel Filler Door Unit
- 5 - Water Drain Hose

Front Doors, Central Locking System

Door Overview



1 - Door

2 - Bolt

- 40 Nm
- Replace after removing

3 - Door Hinge

4 - Bolt

- 23 Nm

5 - Cover

6 - Bolt

- 40 Nm
- Replace after removing

7 - Door Hinge

8 - Bolt

- 40 Nm
- Replace after removing

9 - Bolt

- 40 Nm
- Replace after removing

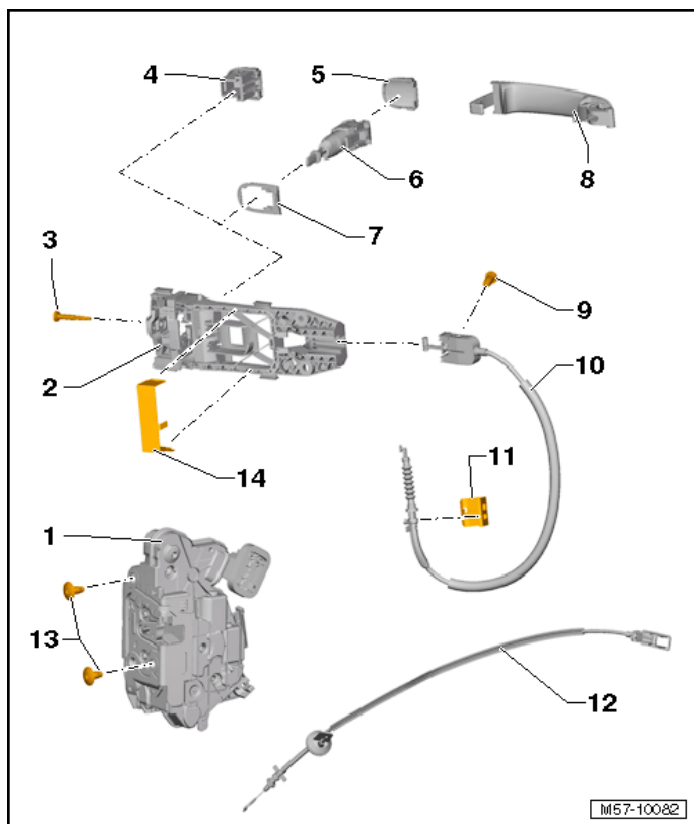
10 - Door Arrester**11 - Bolt**

- 9 Nm

12 - Bolt

- 40 Nm
- Replace after removing

Door Handle and Door Lock Overview

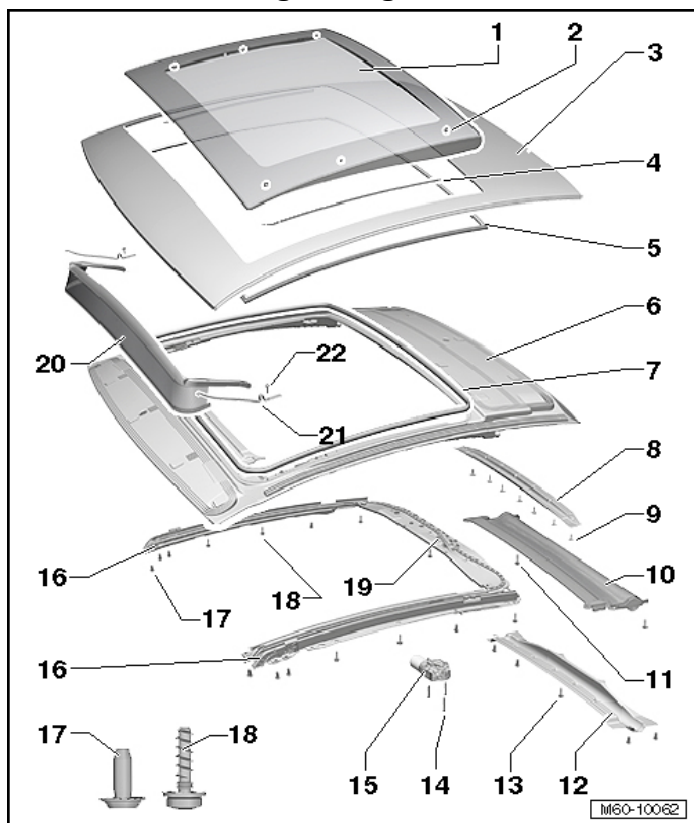


The illustration shows the left side. The right side is identical.

- 1 - Door Lock
- 2 - Bracket
- 3 - Bolt
 - 3.5 Nm
- 4 - Cover
- 5 - Cover
- 6 - Lock Cylinder
- 7 - Backing
- 8 - Door Handle
- 9 - Bolt
 - 1.5 Nm
- 10 - Cable
- 11 - Clips
- 12 - Cable
- 13 - Bolt
 - 18 Nm
- 14 - Bracket Clip

Sunroof

Panorama Sliding/Tilting Sunroof Overview



1 - Glass Cover for Panorama Sliding/Tilting Sunroof (One-Piece Safety Glass)

2 - Bolt

6 Nm

3 - Trim

4 - Trim

5 - Outer Seal

6 - Sunroof Frame

7 - Inner Seal

8 - Crossbrace

9 - Bolt

2.5 Nm

11 - Sunroof Shade

12 - Cover

13 - Bolt

2.5 Nm

14 - Bolt

4 Nm

15 - Electrical Drive Motor

16 - Guide Rails

17 - Bolt

3 Nm

18 - Bolt

2.5 Nm

19 - Mounting Carrier

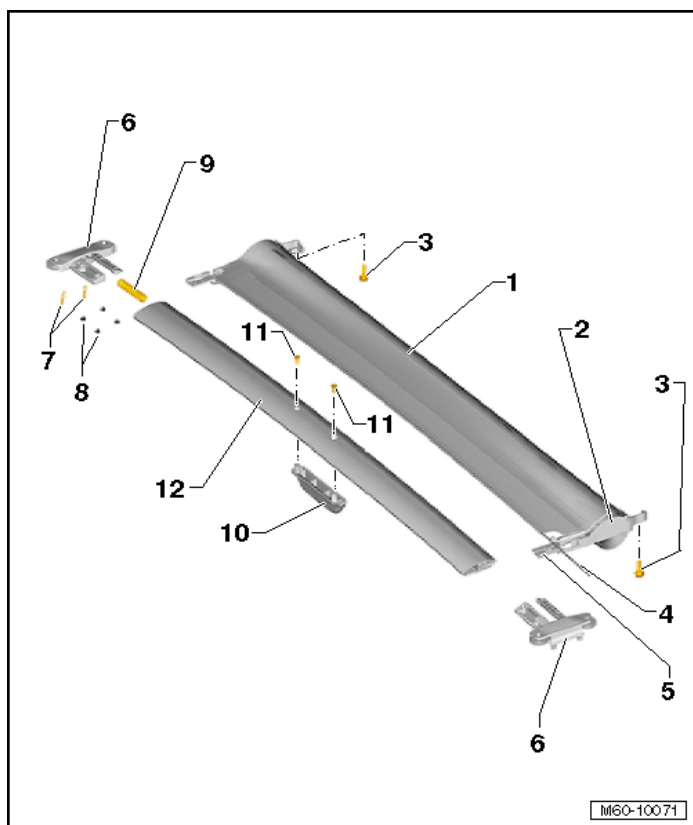
20 - Wind Deflector

21 - Spring

22 - Bolt

1.5 Nm

Sunroof Shade Overview



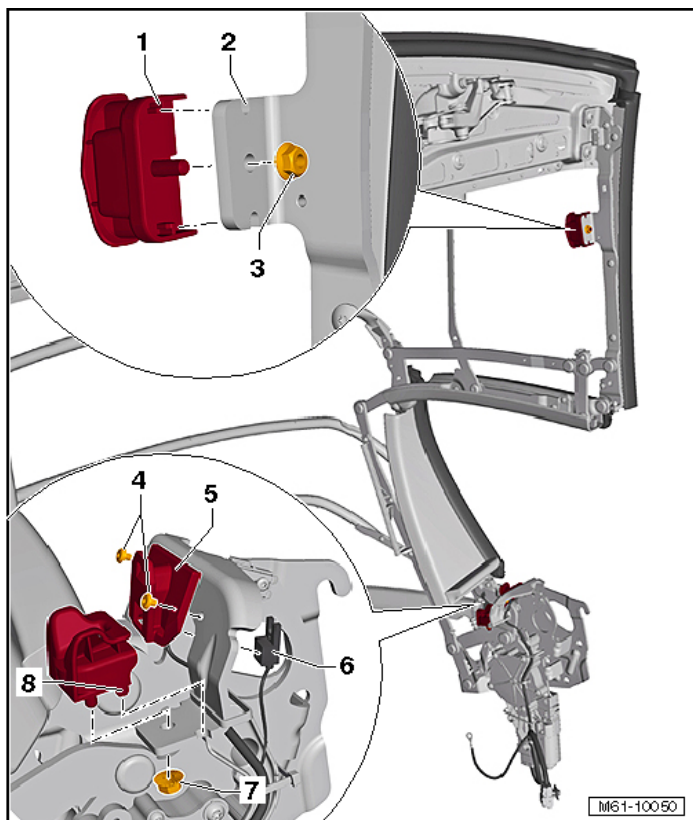
- 1 - Sunroof Shade
- 2 - Mount
- 3 - Bolt
 - 2.5 Nm
- 4 - Tension Wire
- 5 - Tappet
- 6 - Sun Shade Glide
- 7 - Locking Pin
- 8 - Rubber Buffer
- 9 - Tension Spring
- 10 - Handle
- 11 - Bolt
 - 1 Nm
- 12 - Side Rail

Tightening Specifications

Component	Nm
Hood catch bolts	10
Hood latch bolts	12
Rear lid actuator bolts	6
Rear lid latch bolts	18
Rear lid lock bolts	23

Convertible Top

Stop Buffer Overview



1 - Stop Buffer with Fitting Tabs

2 - Fitting Grooves on the Linkage

3 - Nut

9 Nm

4 - Rivet

5 - Stop Buffer for the Convertible Top Cover

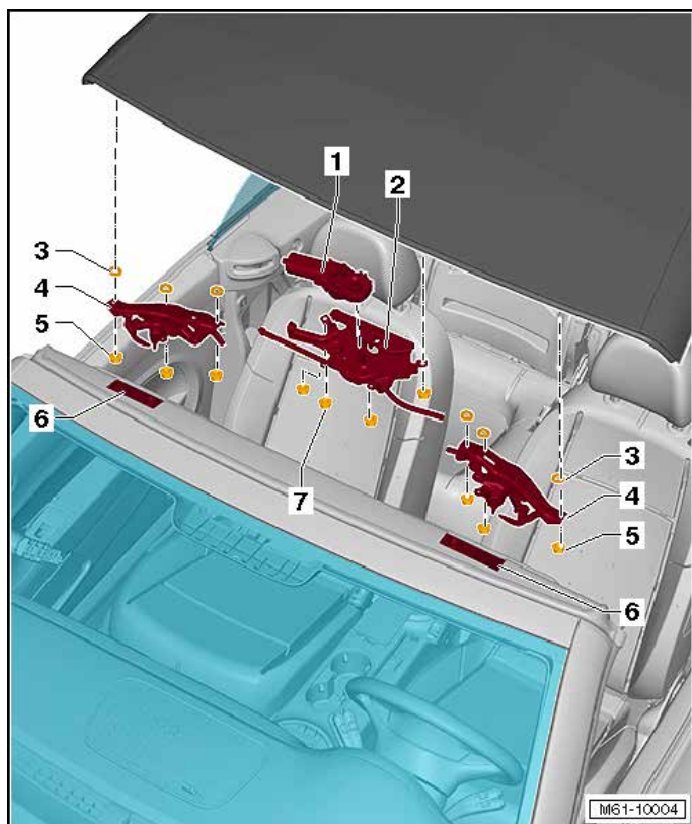
6 - Left Convertible Top Compartment Cover Switch -F290-

7 - Nut

9 Nm

8 - Stop Buffer with Fitting Tabs

Convertible Top Latch Overview



Body

1 - Convertible Top Locking Motor -V223-

2 - Convertible Top Latch

3 - Grommet

4 - Convertible Top Lock

5 - Nut

□ 9 Nm

6 - Rear Lid Catch

7 - Nut

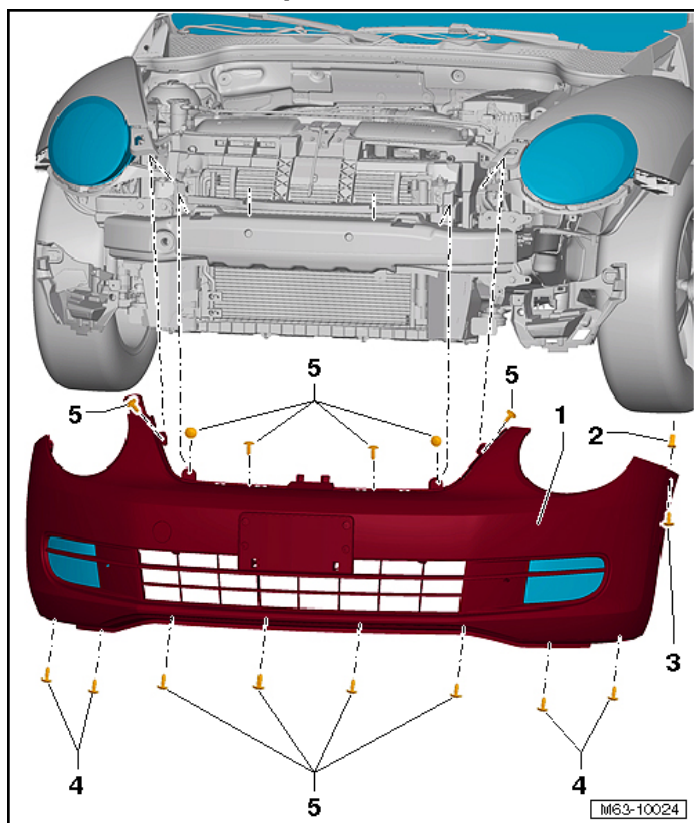
□ 9 Nm

Tightening Specifications

Component	Nm
Convertible top striker bolt	19
Convertible top retaining plate bolt	9

Bumpers

Front Bumper Cover Overview



1 - Front Bumper Cover

2 - Expanding Nut

3 - Bolt

2 Nm

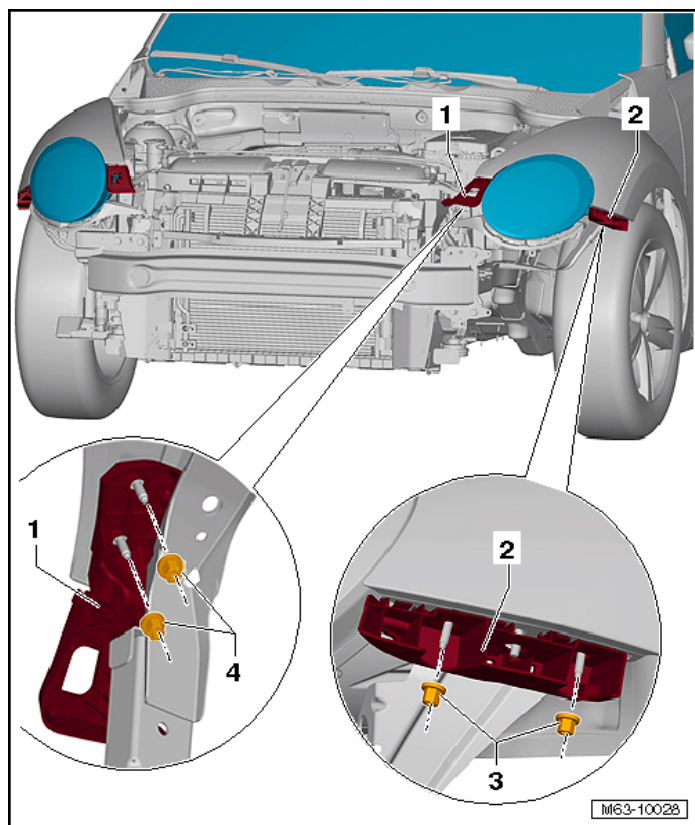
4 - Bolt

2 Nm

5 - Bolt

2 Nm

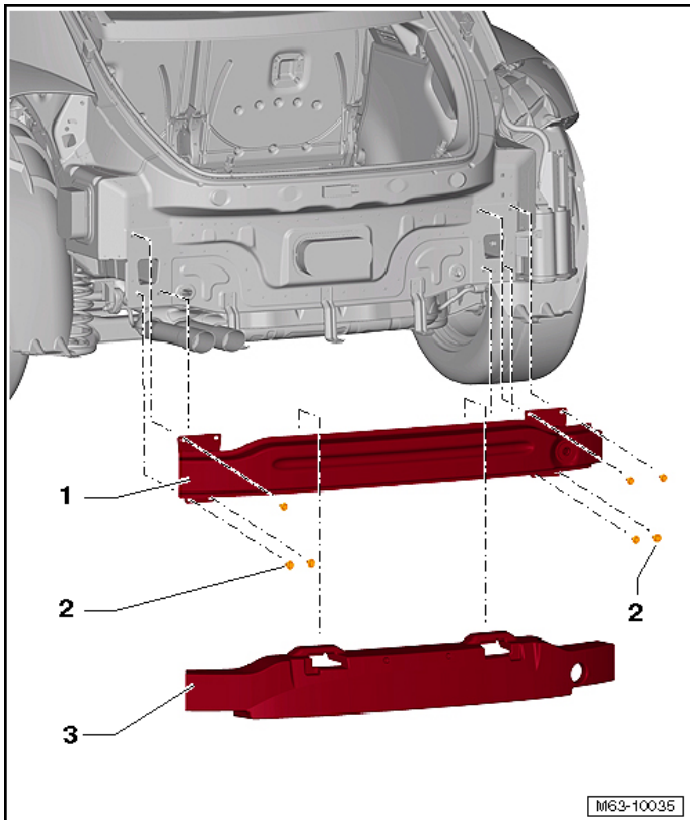
Guides and Brackets Overview



Body

- 1 - Bracket
- 2 - Side Guide
- 3 - Nut
 - 3 Nm
- 4 - Nut
 - 3 Nm

Front Bumper Carrier Overview



1 - Front Bumper Carrier

2 - Bolt

8 Nm

3 - Bolt

60 Nm

4 - Bolt

5 - Noise Insulation Bracket

Convertible only

6 - Foam Piece

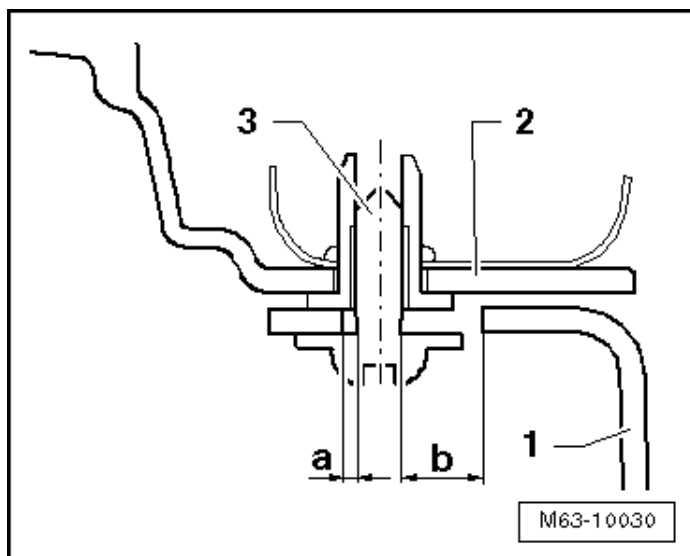
7 - Rear Bumper Carrier

8 - Bolt

20 Nm

9 - Foam Piece

Front Bumper Carrier on the Lock Carrier

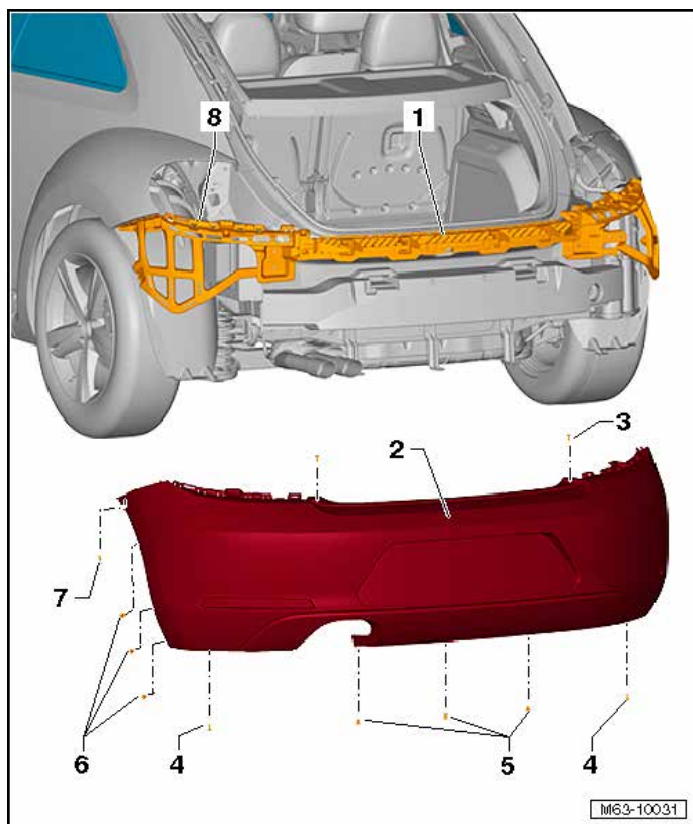


Body

3 - Bolt

□ 8 Nm

Rear Bumper Cover Overview



1 - Center Guide

2 - Rear Bumper Cover

3 - Bolt

2 Nm

4 - Bolt

2 Nm

5 - Expanding Rivet

6 - Bolt

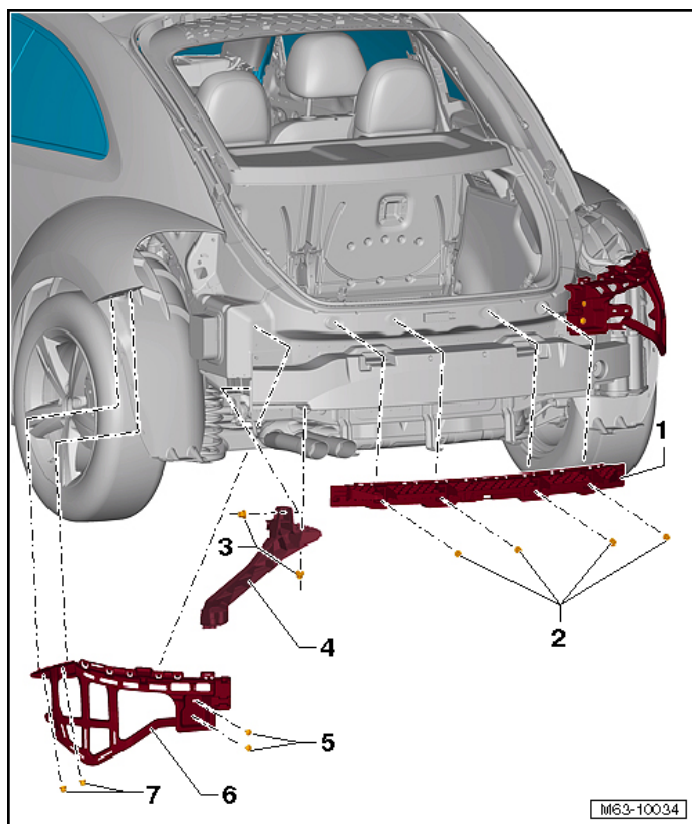
2 Nm

7 - Bolt

2 Nm

8 - Side Guide

Guides and Brackets Overview



Body

1 - Center Guide

2 - Nut

3 Nm

3 - Nut

3 Nm

4 - Attachment

5 - Bolt

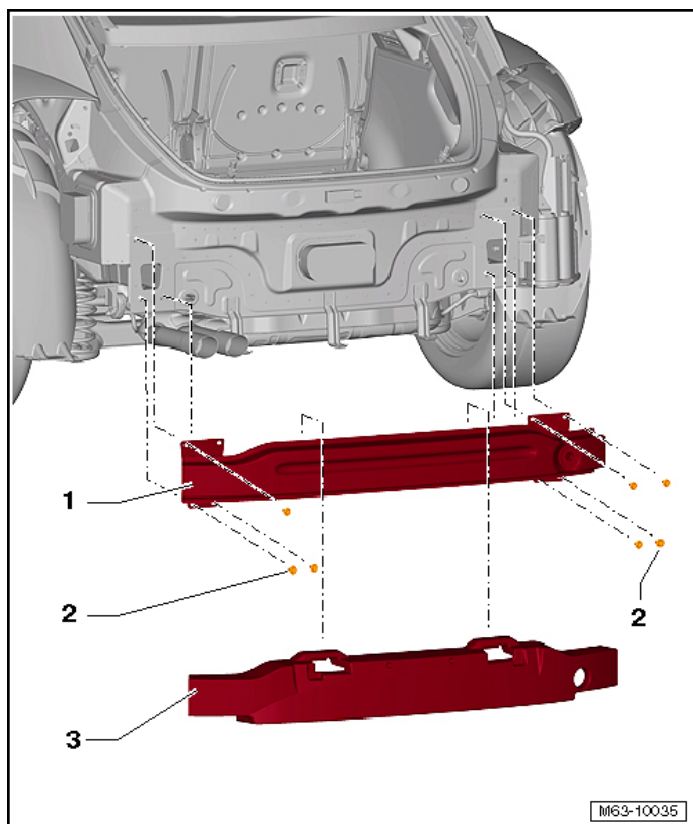
3 Nm

6 - Side Guide

7 - Nut

3 Nm

Rear Bumper Carrier Overview



1 - Rear Bumper Carrier

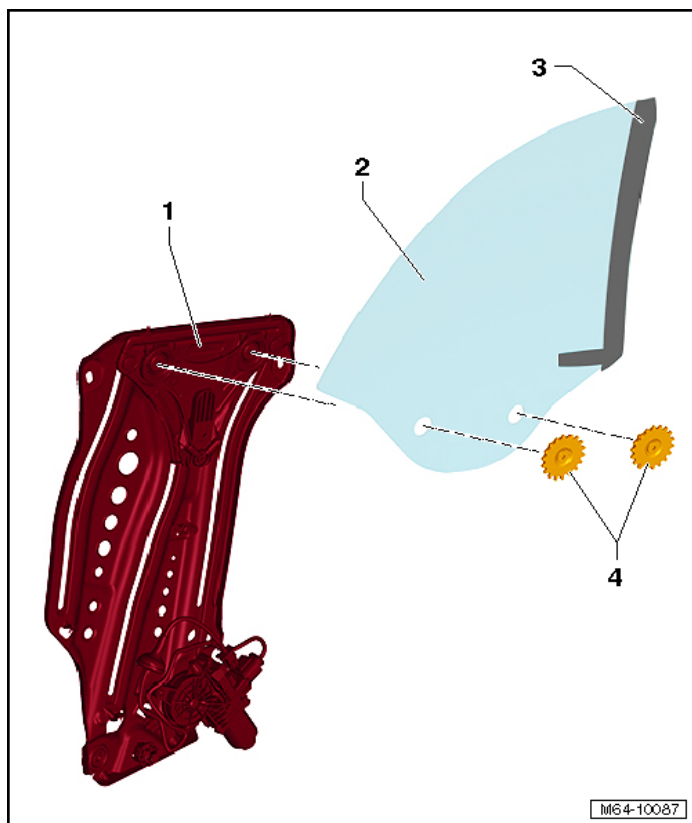
2 - Bolt

□ 20 Nm

3 - Foam Piece

Glass, Window Regulators

Side Window Overview, Convertible



Body

1 - Window Regulator

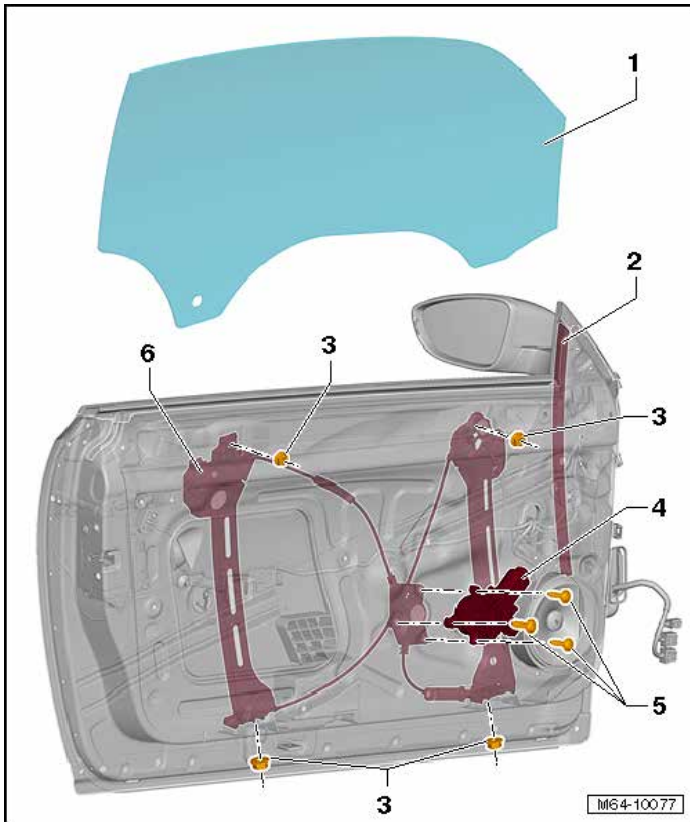
2 - Side Window

3 - Seal

4 - Bolt

□ 9 Nm

Front Door Window Overview



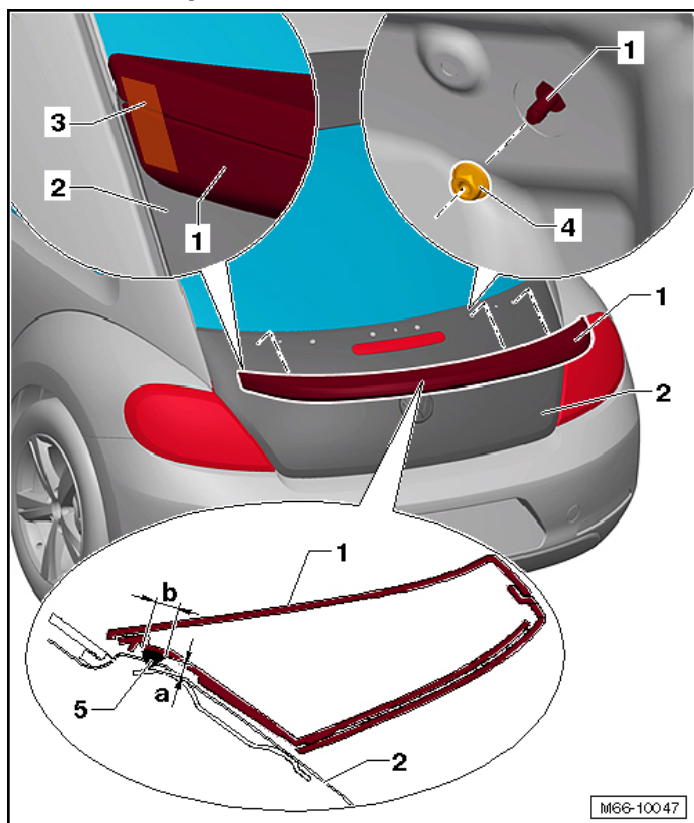
- 1 - Door Window
- 2 - Window Guide
- 3 - Nut
 - 9 Nm
- 4 - Window Regulator Motor
- 5 - Bolt
 - 3 Nm
- 6 - Window Regulator

Tightening Specifications

Component	Nm
Clamping screws	6
Front door window regulator motor bolt	3
Front window regulator nut	9
Intermediate plate bolts	12
Side window regulator bolt	9
Side window regulator nuts	12
Speaker housing bolts	9

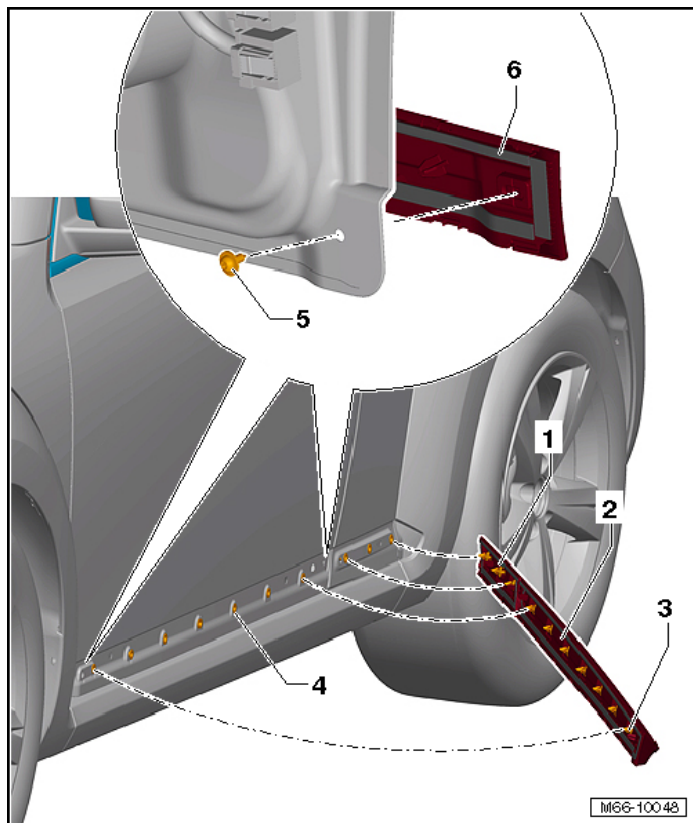
Exterior Equipment

Spoiler Overview, Sedan



- 1 - Rear Spoiler
- 2 - Rear Lid
- 3 - Adhesive Tape
- 4 - Bolt
 - 10 Nm
- 5 - Adhesive

Decorative Trim and Covers Overview



Body

1 - Side Panel Trim Molding

2 - Door Trim Strip

3 - Clip

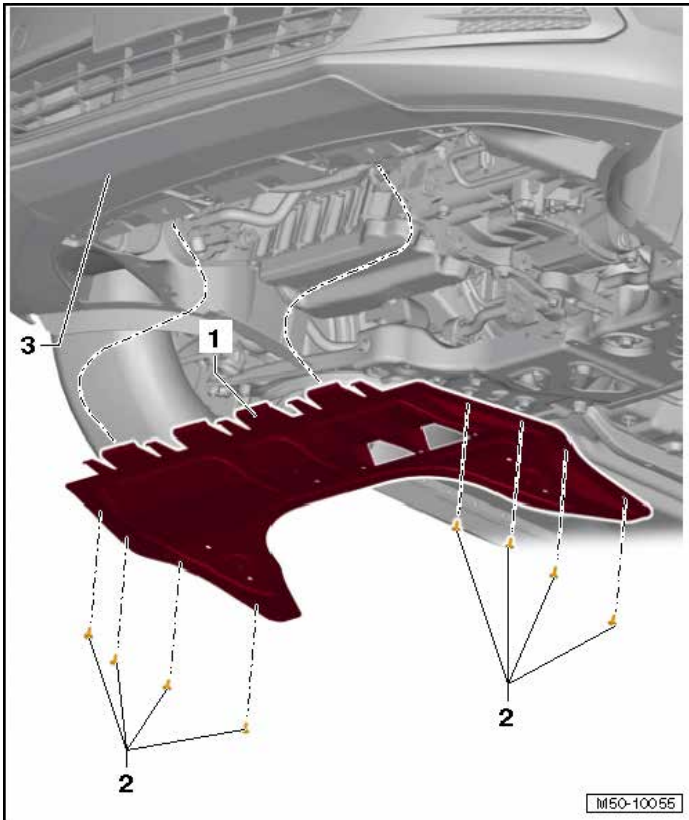
4 - Grommet

5 - Bolt

□ 1.5 Nm

6 - Adhesive Tape

Noise Insulation Overview, Sedan and Gasoline Engine



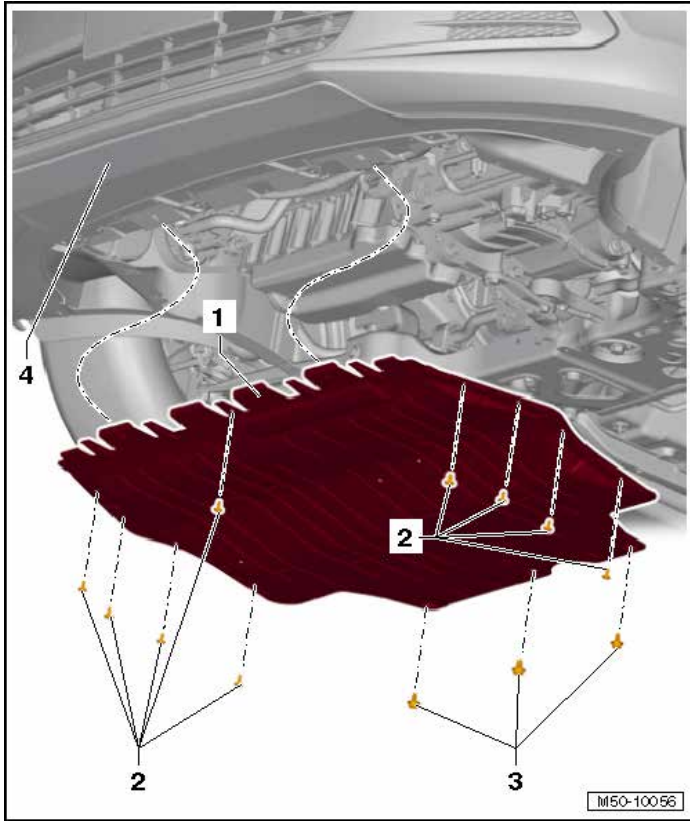
1 - Noise Insulation

2 - Bolt

□ 2 Nm

3 - Front Bumper Cover

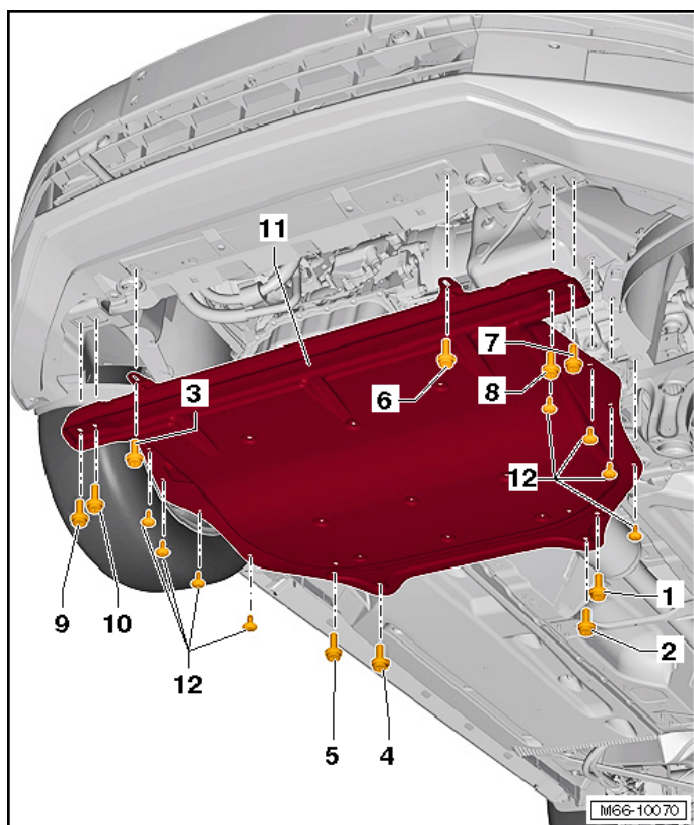
Noise Insulation Overview, Sedan and Diesel Engine



Body

- 1 - e Insulation
- 2 - Bolt
 - 2 Nm
- 3 - Bolt
 - 6 Nm
- 4 - Front Bumper Cover

Noise Insulation Overview, Convertible



1 - 10 Bolt

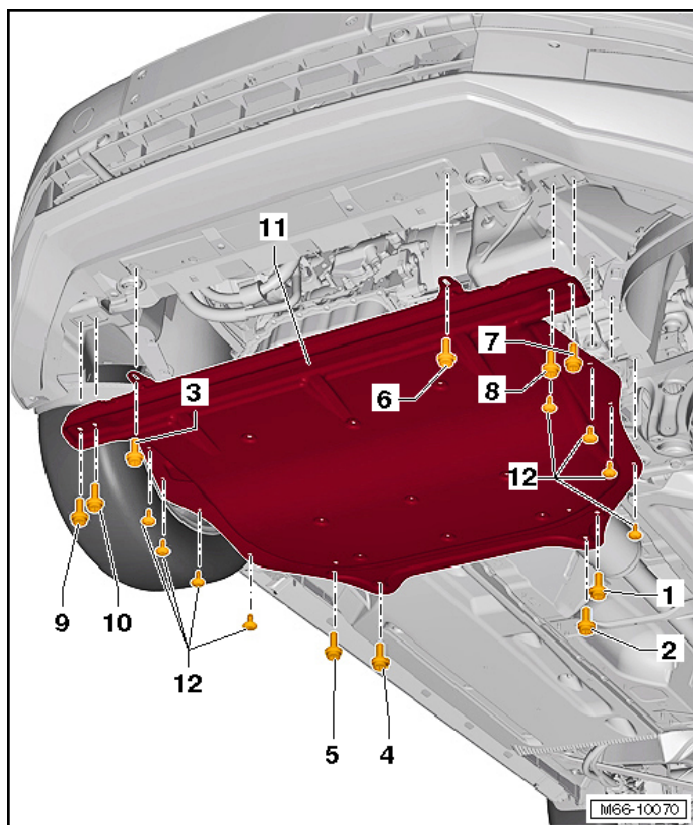
20 Nm

2 - Noise Insulation

3 - Bolt

2 Nm

Noise Insulation Overview, Convertible



Body

1 - 10 Bolt

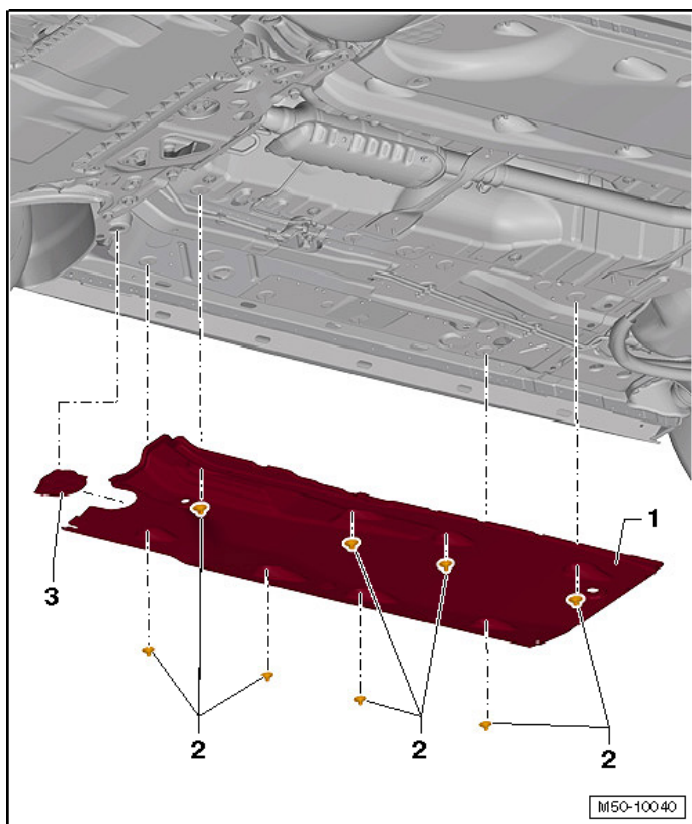
20 Nm

2 - Noise Insulation

3 - Bolt

2 Nm

Underbody Panels Overview, Sedan



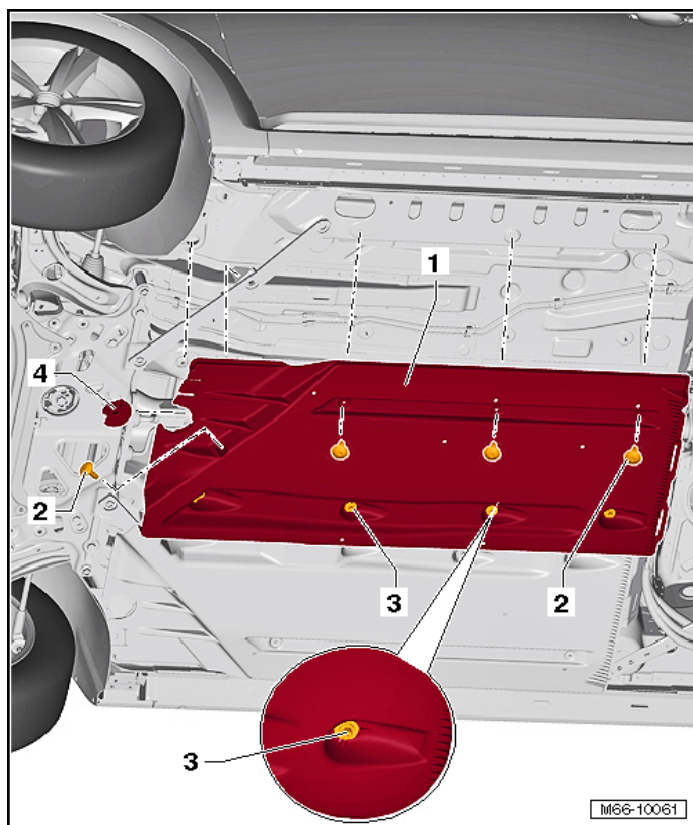
1 - Underbody Panel

2 - Nut

□ 2 Nm

3 - Cover

Underbody Panels Overview, Convertible



Body

1 - Underbody Panel

2 - Bolt

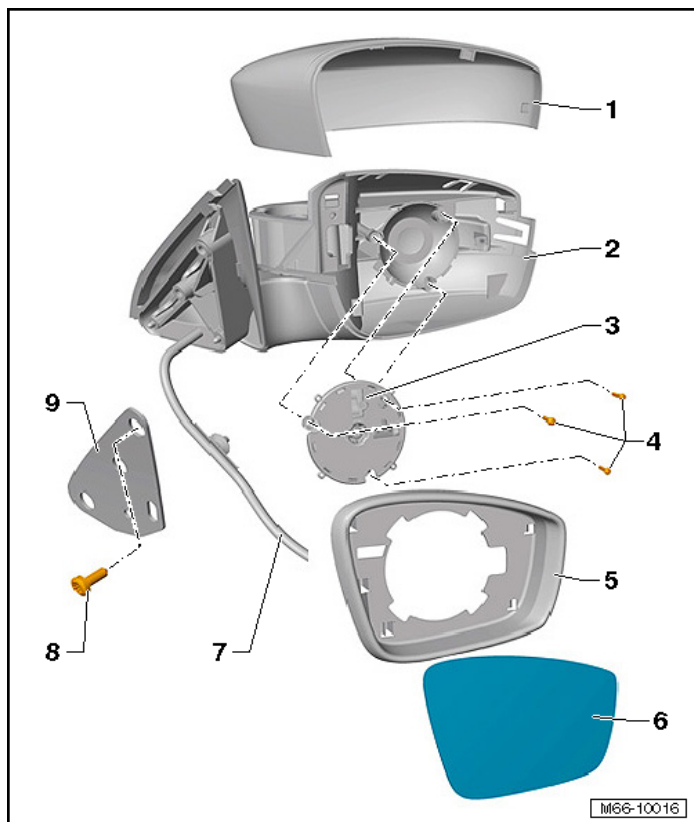
2 Nm

3 - Nut

2 Nm

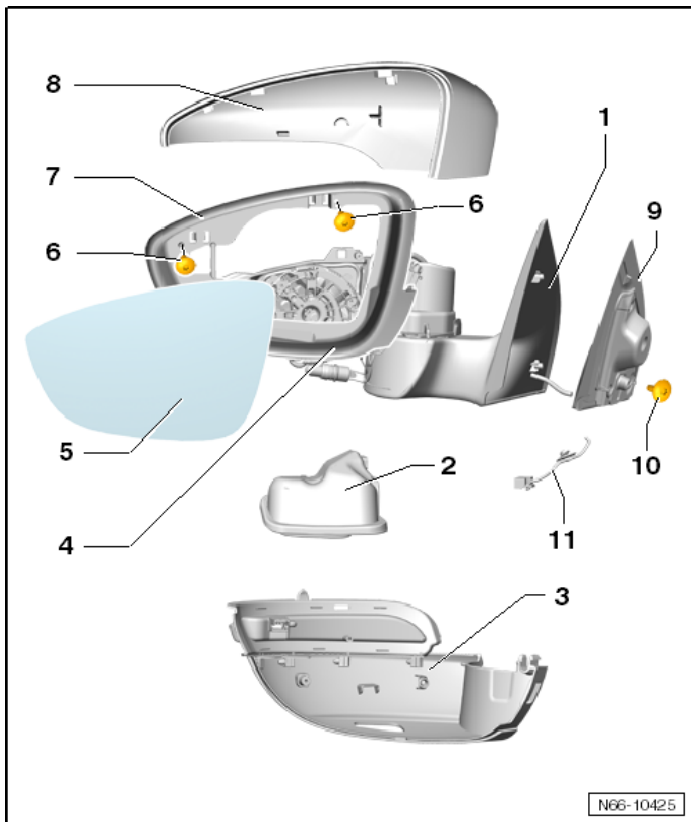
4 - Cover

Exterior Review Mirror Without Exterior Rearview Mirror Turn Signal Overview



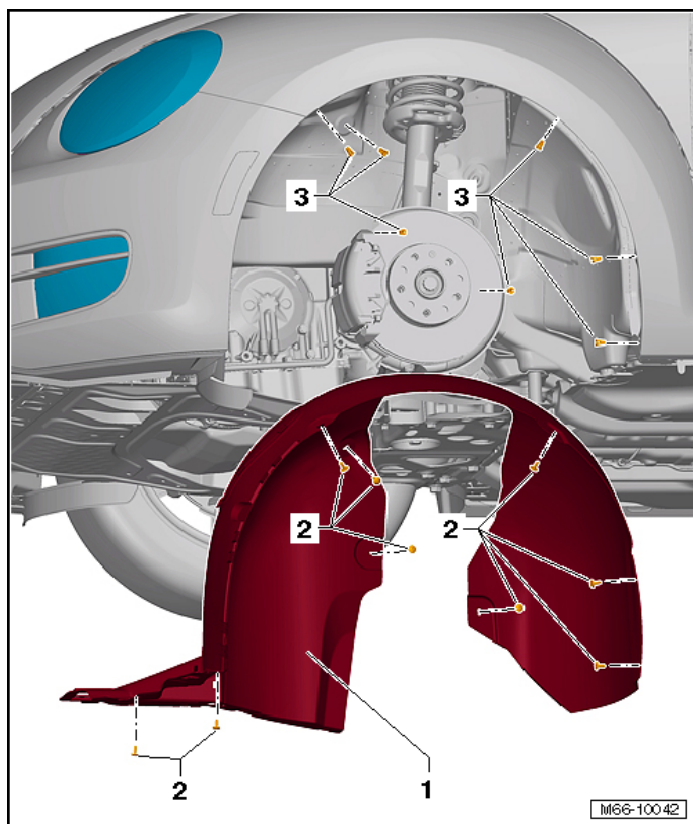
- 1 - Mirror Cap
- 2 - Mirror Base Plate
- 3 - Mirror Adjusting Unit
- 4 - Bolt
 - 2 Nm
- 5 - Mirror Trim
- 6 - Mirror Glass
- 7 - Electric Wire with Connector
- 8 - Bolt
 - 2 Nm
- 9 - Insulation

Exterior Review Mirror With Exterior Rearview Mirror Turn Signal Overview



- 1 - Mirror Base Plate**
- 2 - Entry Lamp**
- 3 - Assembly Piece**
- 4 - Bulb for Entry Lamp**
- 5 - Mirror Glass**
- 6 - Bolt**
 - 2 Nm
- 7 - Mirror Trim**
- 8 - Mirror Cap**
- 9 - Insulation**
- 10 - Bolt**
 - 12 Nm
- 11 - Connector**

Front Wheel Housing Liner Overview



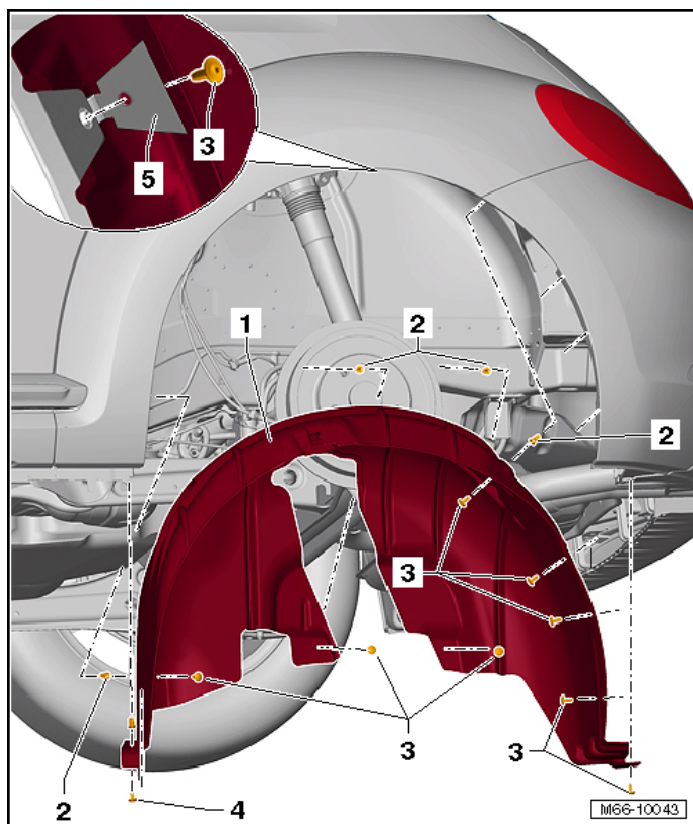
1 - Wheel Housing Liner

2 - Bolt

□ 2 Nm

3 - Expanding Nut

Rear Wheel Housing Liner Overview



Body

1 - Wheel Housing Liner

2 - Expanding Nut

3 - Bolt

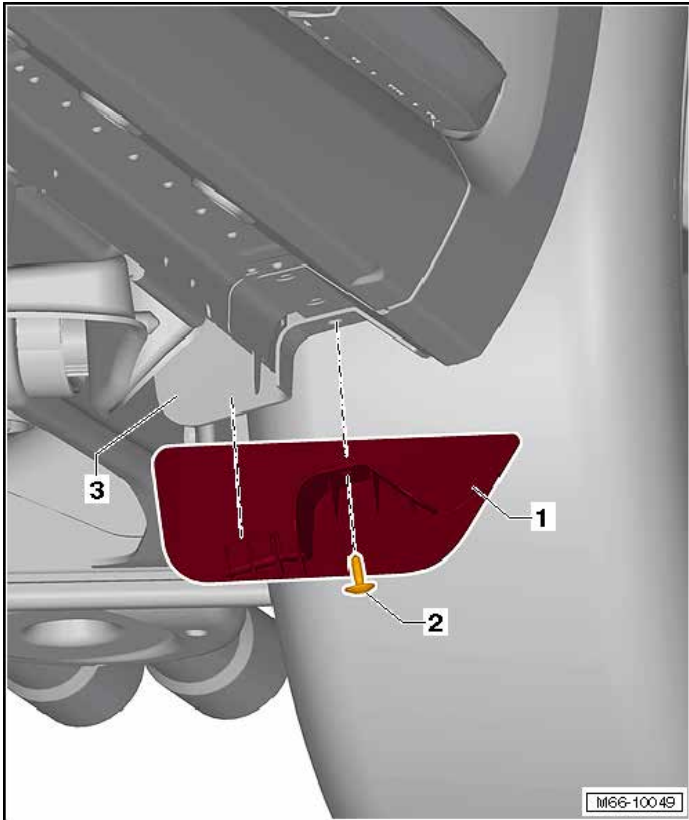
2 Nm

4 - Bolt

2 Nm

5 - Bracket

Sill Panel Cover



1 - Sill Panel Cover

2 - Bolt

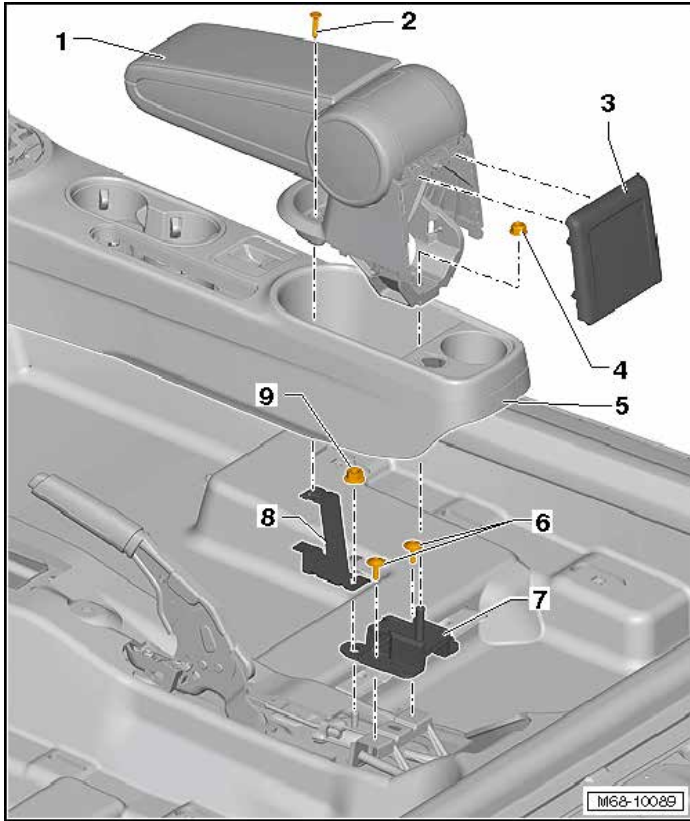
□ 2 Nm

3 - Rear Wheel Housing Liner

Body Interior

Interior Equipment

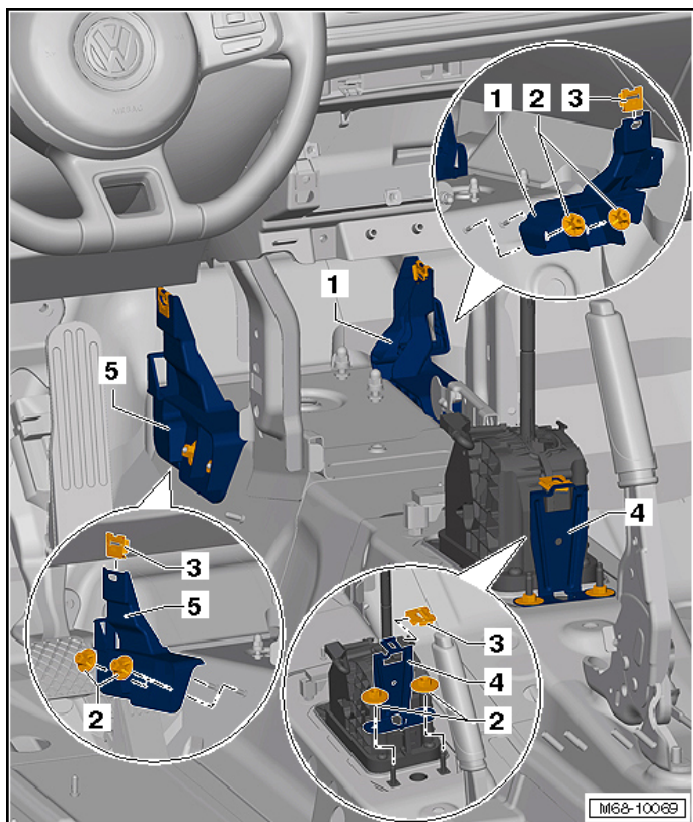
Front Center Armrest Assembly Overview



Body

- 1 - Center Armrest**
- 2 - Bolt**
 - 1.5 Nm
- 3 - Trim**
- 4 - Nut**
 - 15 Nm
- 5 - Bolt**
 - 12 Nm
- 6 - Bolt**
 - 2 Nm
- 7 - Support Base**
- 8 - Bracket**
- 9 - Nut**
 - 12 Nm

Center Console Mounting Bracket Assembly Overview



1 - Right Front Bracket

2 - Nut

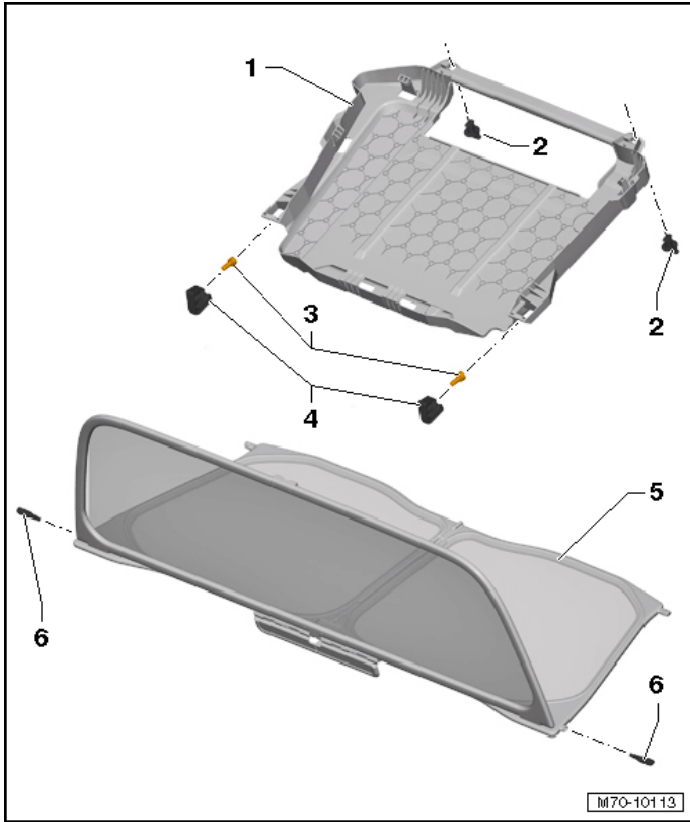
□ 2 Nm

3 - Spring Nut

4 - Support

5 - Left Front Bracket

Wind Deflector Assembly Overview



Body

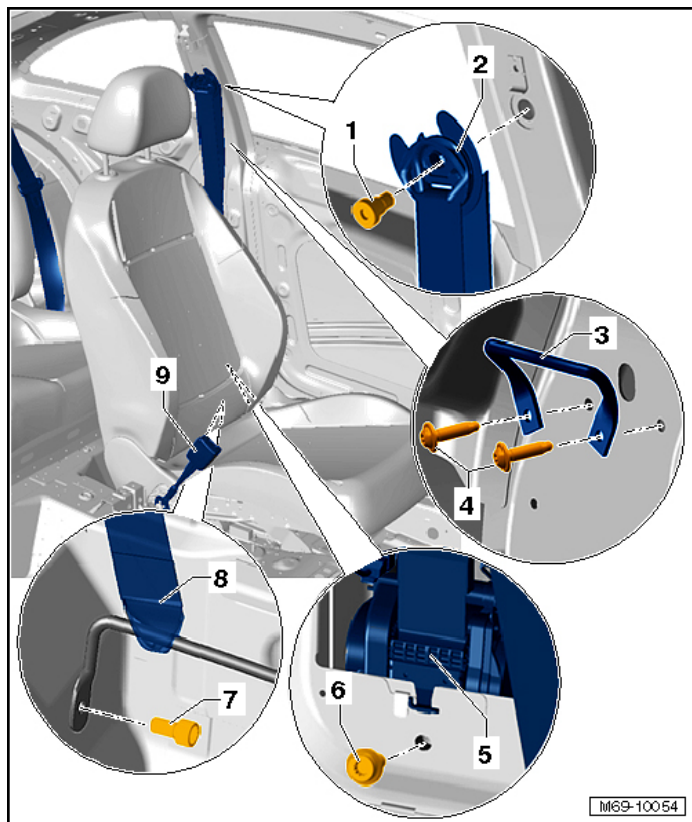
- 1 - Wind Deflector Mount
- 2 - Knob
- 3 - Bolt
 - 5 Nm
- 4 - Bracket
- 5 - Wind Deflector
- 6 - Bolt

Additional Tightening Specifications

Component	Nm
Bolts for driver side instrument panel cover	1.5
Bolts for front passenger side instrument panel cover	1.5
Bolts for instrument panel reinforcement	1.5
Bolts for steering column trim	1.5
Bolts for glove compartment opener	1.5
Bolts for storage compartment in headliner	2
Bolt for center sunvisor support	2
Bolts for center support	1.5
Grab handle bracket bolt	4.5
Lower section threaded connection bolts	12
Center armrest bracket nut	12
Bolts for center armrest support	12
Bolts for center console cover	1.5
Center console bolts	1.5
Bracket nuts	2
Footwell trim panel bolt	1.5
Center armrest nut	15

Passenger Protection, Airbags, Seat Belts

Front Three-Point Seat Belt Assembly Overview, Sedan



Body

1 - Bolt

- 40 Nm

2 - Seat Belt Guide Ring

3 - Seat Belt Guide

4 - Bolt

- 4.5 Nm

5 - Automatic Belt Retractor

6 - Bolt

- 40 Nm

- Micro-encapsulated, replace after each loosening

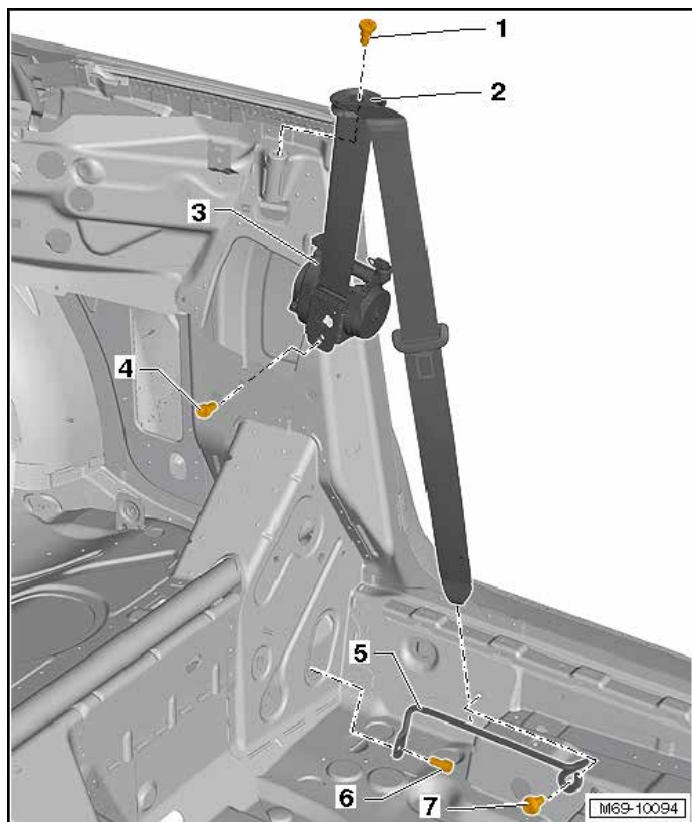
7 - Bolt

- 20 Nm

8 - Belt

9 - Seat Belt Latch

Front Three-Point Seat Belt Assembly Overview, Convertible



1 - Bolt

- 40 Nm

2 - Seat Belt Guide Ring

3 - Automatic Belt Retractor

4 - Bolt

- 40 Nm
- Micro-encapsulated, replace after each loosening

5 - Belt Guide Bracket

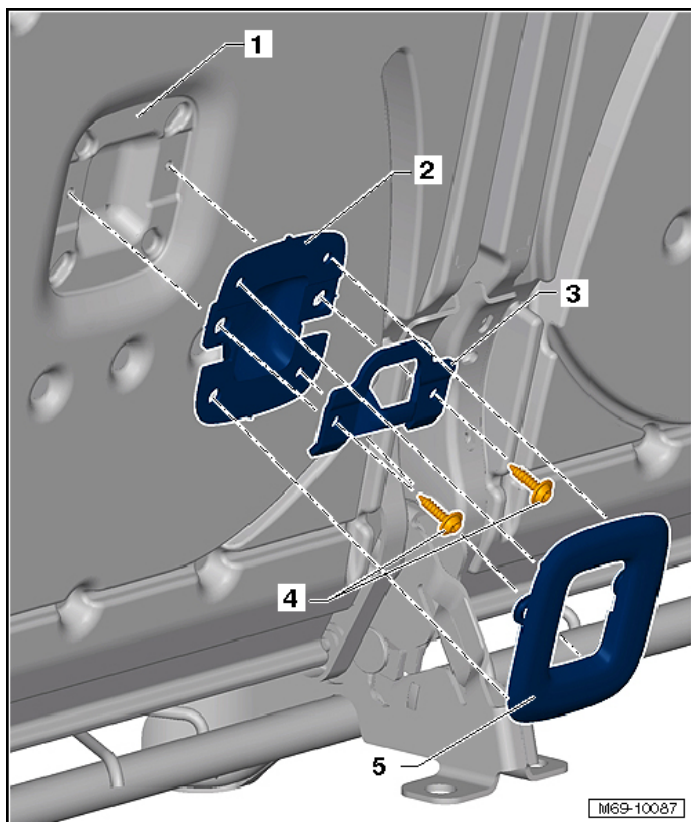
6 - Bolt

- 20 Nm

7 - Bolt

- 40 Nm

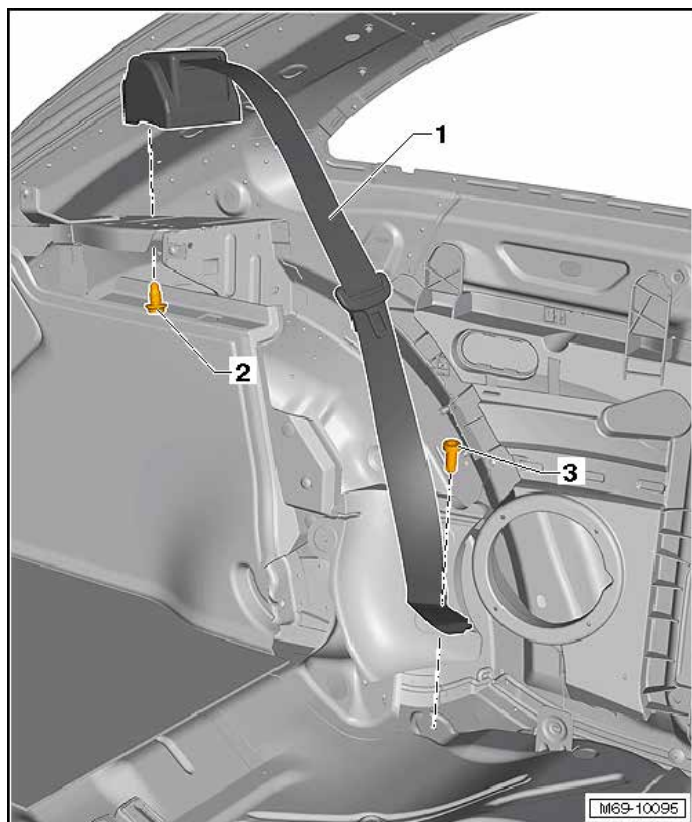
Rear Child Seat Anchors Assembly Overview, Upper Tether



Body

- 1 - Bracket
- 2 - Inner Trim
- 3 - Bracket
- 4 - Bolt
 - 4 Nm
- 5 - Outer Trim

Rear Outer Three-Point Seat Belt Assembly Overview, Sedan



1 - Automatic Belt Retractor

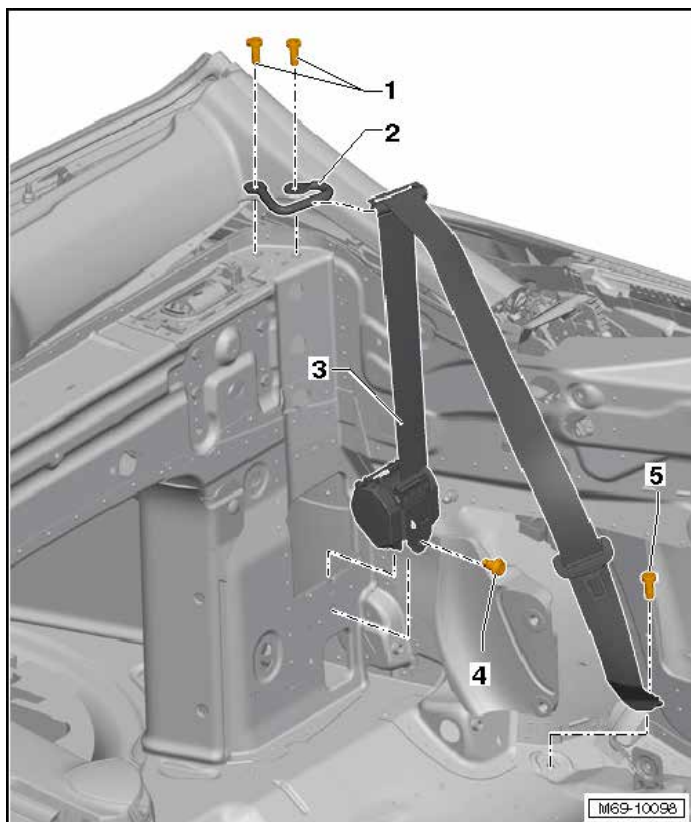
2 - Bolt

- 40 Nm
- Micro-encapsulated, replace after each loosening

3 - Bolt

- 40 Nm

Rear Outer Three-Point Seat Belt Assembly Overview, Convertible



Body

1 - Bolt

- 40 Nm

2 - Seat Belt Guide

3 - Automatic Belt Retractor

4 - Bolt

- 40 Nm
- Micro-encapsulated, replace after each loosening

5 - Bolt

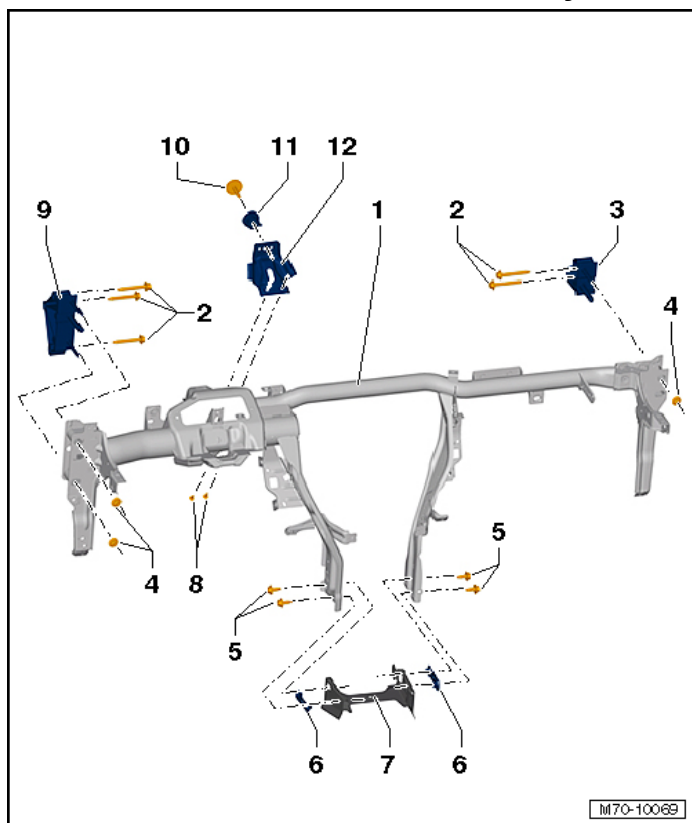
- 40 Nm

Additional Tightening Specifications

Component	Nm
Bolt for footwell trim	1.5
Nuts for Airbag Control Module -J234-	9
Bolts for front passenger airbag unit bracket	9
Bolt for Driver Front Airbag Crash Sensor -G283-	4.5
Bolt for Passenger Side Front Airbag Crash Sensor -G284-	4.5
Bolt for Passenger Occupant Detection System Control Module -J706-	1.5
Rollover protection bolt - always replace	20

Interior Trim

Instrument Panel Central Tube Assembly Overview



1 - Instrument Panel Central Tube

2 - Bolt

□ 20 Nm

3 - Mount with Extensor

4 - Nut

□ 20 Nm

5 - Bolt

□ 20 Nm

6 - Threaded Plate

7 - Center Channel Mount

8 - Bolt

□ 6 Nm

9 - Mount with Extensor

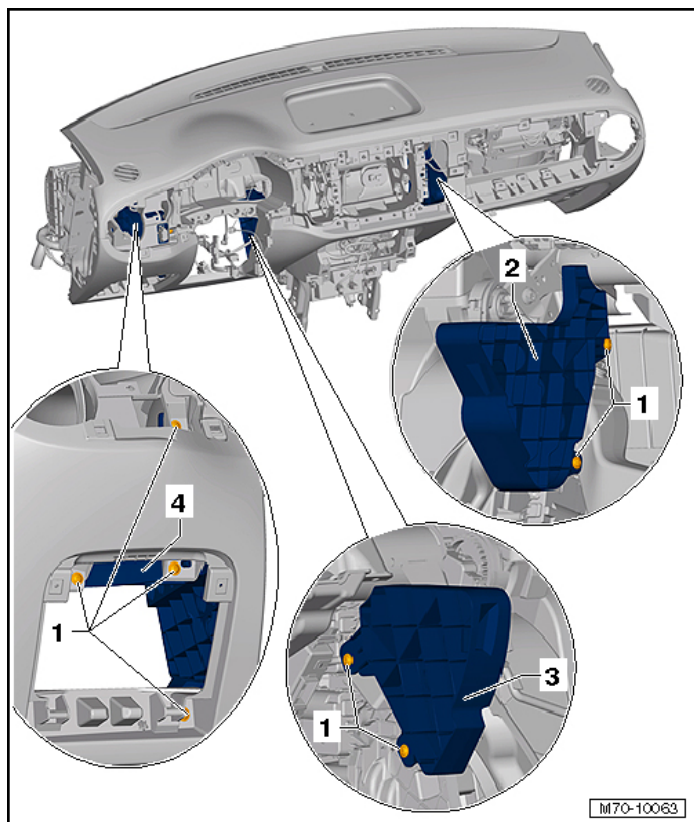
10 - Bolt

□ 20 Nm

11 - Adjuster

12 - Brace

Bumper and Glove Compartment Mount Assembly Overview



1 - Bolt

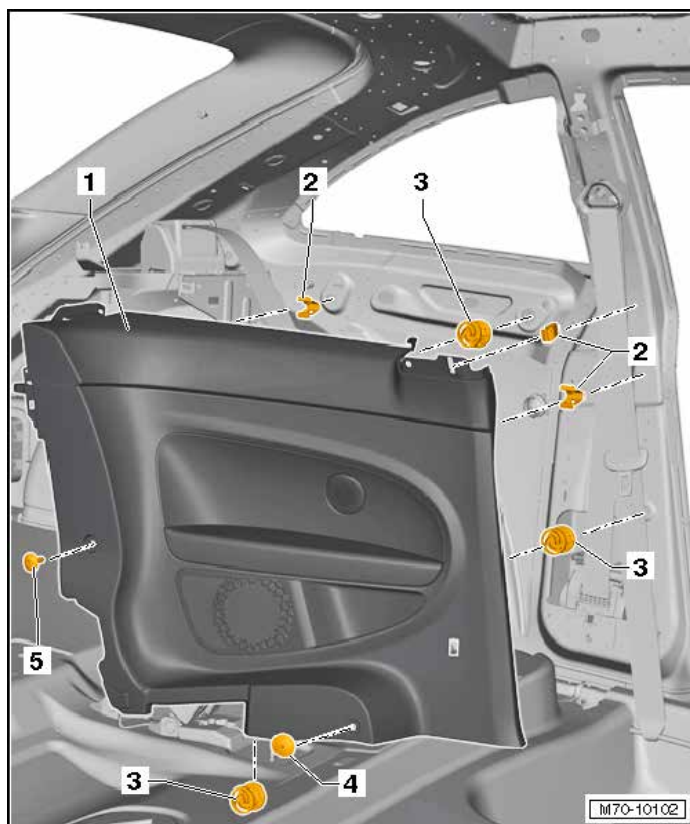
□ 1.5 Nm

2 - Front Passenger Side Deformation Element

3 - Center Deformation Element

4 - Driver Side Deformation Element

Side Trim Panel Assembly Overview, Sedan

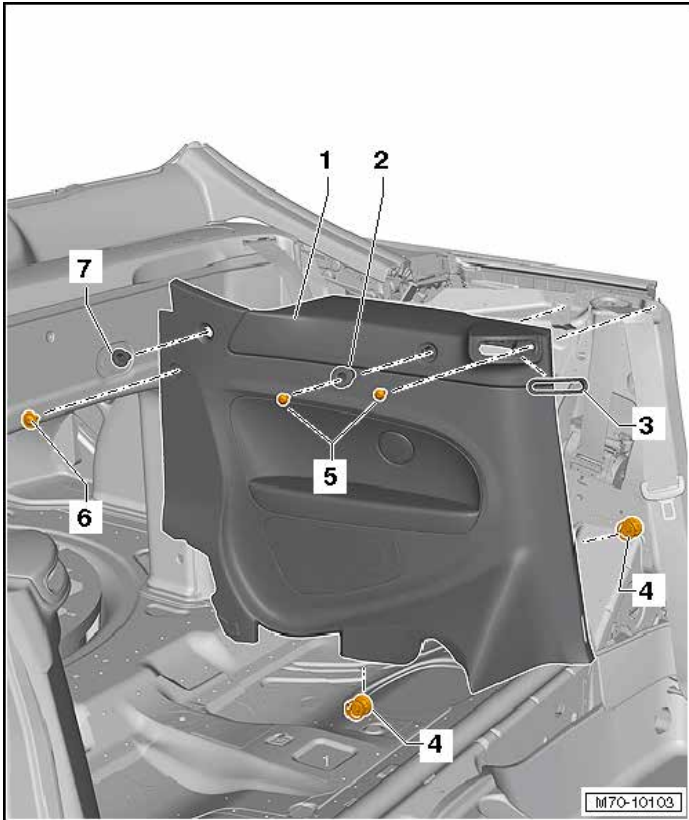


Body

- 1 - Side Trim Panel
- 2 - Clips
- 3 - Clip
- 4 - Clip
- 5 - Bolt

□ 3. Nm

Side Trim Panel Assembly Overview, Convertible



1 - Side Trim Panel

2 - Front Mount

3 - Trim

4 - Clip

5 - Bolt

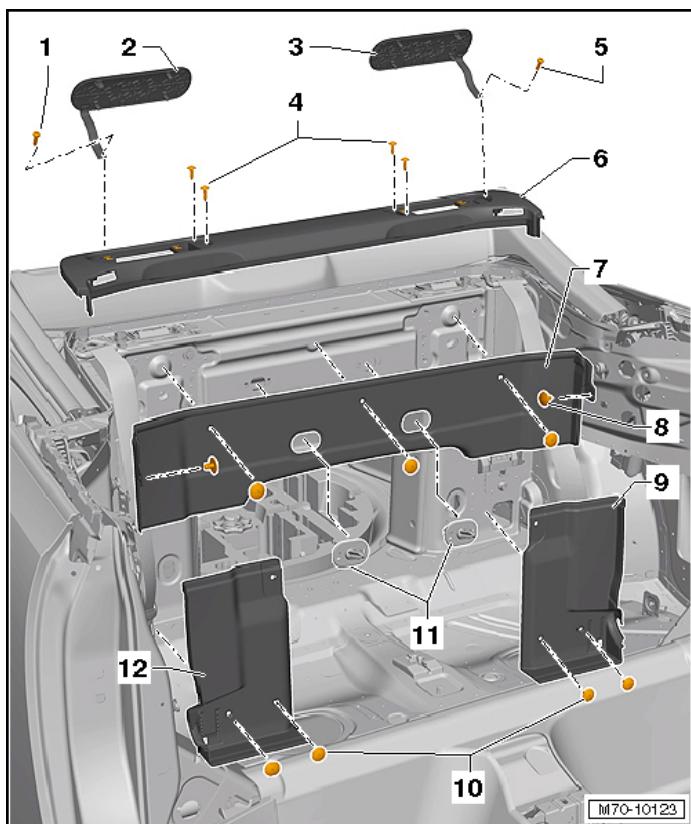
2 Nm

6 - Bolt

2 Nm

7 - Rear Mount

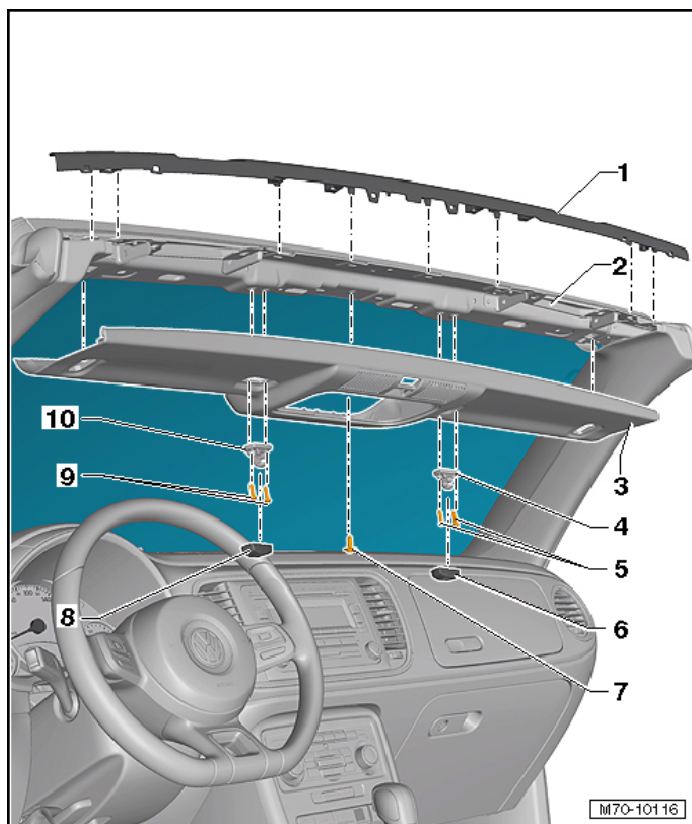
Rear Panel Trim Panel Assembly Overview



Body

- 1 - Bolt
 - 1.5 Nm
- 2 - Cover
- 3 - Cover
- 4 - Bolt
 - 1.5 Nm
- 5 - Bolt
 - 1.5 Nm
- 6 - Upper Rear Panel Trim Panel
- 7 - Center Rear Panel Trim Panel
- 8 - Clip
- 9 - Trim
- 10 - Clip
- 11 - Backrest Unlock Pressure Pins
- 12 - Trim

Roof Frame Trim Assembly Overview



1 - Upper Roof Frame Trim

2 - Roof Frame

3 - Lower Roof Frame Trim

4 - Right Sun Visor Center Support

5 - Bolt

2 Nm

6 - Cover

7 - Bolt

2 Nm

8 - Cover

9 - Bolt

2 Nm

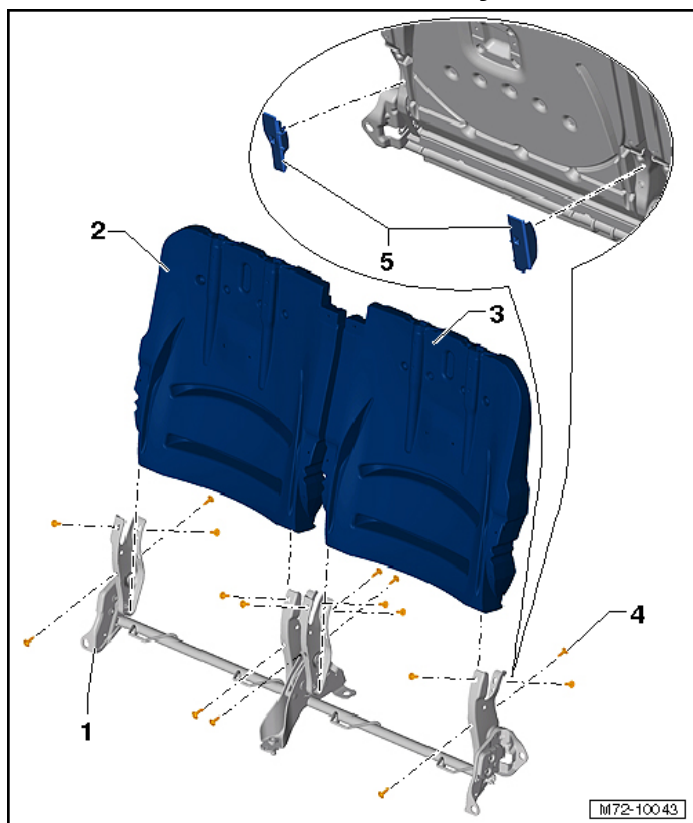
10 - Left Sun Visor Center Support

Additional Tightening Specifications

Component	Nm
Bolts for door trim 4.5 Nm	4.5
Bolts for mirror cover 1.5 Nm	1.5
Bolts for instrument panel 1.5 Nm	1.5
Bolts for front passenger airbag unit bracket 9 Nm	9
Bolts/nuts for securing the instrument panel 20 Nm	20
Bolt for footwell trim 1.5 Nm	1.5
Central tube nuts (center) 9 Nm	9
Driver side mounting bracket bolts 20 Nm	20
Passenger side mounting bracket bolts 20 Nm	20
Impact absorber bracket bolts 1.5 Nm	1.5
Sill panel nuts 1.5 Nm	1.5
Bolts for deformation element 25 Nm	25
Bolt for retaining loop 2 Nm	2
Bolt for B-pillar trim 2 Nm	2
Side panel trim bolt 3.5 Nm (sedan)	3.5
Side panel trim bolt 2 Nm (convertible)	2
Bolt for lock carrier trim 3 Nm	3
Bolt for rear shelf compartment 1.5 Nm	1.5
Bolts for rear lid trim panel 1.5 Nm	1.5
Bolt for rear lid trim panel 1.5 Nm	1.5
Sun visor support bolt 2 Nm	2
Upper roof frame bolt 2 Nm	2

Seat Frames

Rear Seat Backrest Assembly Overview



1 - Rear Seat Backrest Frame

2 - Right Backrest Shell

3 - Left Backrest Shell

4 - Bolt

□ 4 Nm

5 - Cover

Additional Tightening Specifications

Component	Nm
Front seat bolt	40
Seat height adjustment bolt	8
Door sill side seat trim bolt	8
Front seat trim bracket bolt	8
Front seat backrest bolt	33 +/- 3
Rear seat backrest bolts	40

Seat Frames

Tightening Specifications

Component	Nm
Seat bolt	40
Backrest bolt - 33 Nm	33 +/- 3
Rear seat backrest bolt	40
Belt latch bolt	40

Body

HEATING, VENTILATION & AIR CONDITIONING

General, Technical Data

Refrigerant Oil Distribution

Component	Approximate % of total amount of oil in component
A/C compressor	50
Condenser	10
Suction hose	10
Evaporator	20
Fluid reservoir	10

Refrigerant R134a Vapor Pressure Table

Temperature in °C	Pressure in bar (positive pressure) of R134a
-45	-0.61
-40	-0.49
-35	-0.34
-30	-0.16
-25	0.06
-20	0.32
-15	0.63
-10	1.00
-5	1.43
0	1.92
5	2.49
10	3.13
15	3.90
20	4.70
25	5.63
30	6.70
35	7.83
40	9.10
45	10.54
50	12.11
55	13.83
60	15.72
65	17.79
70	20.05
75	22.52
80	25.21
85	28.14
90	31.34

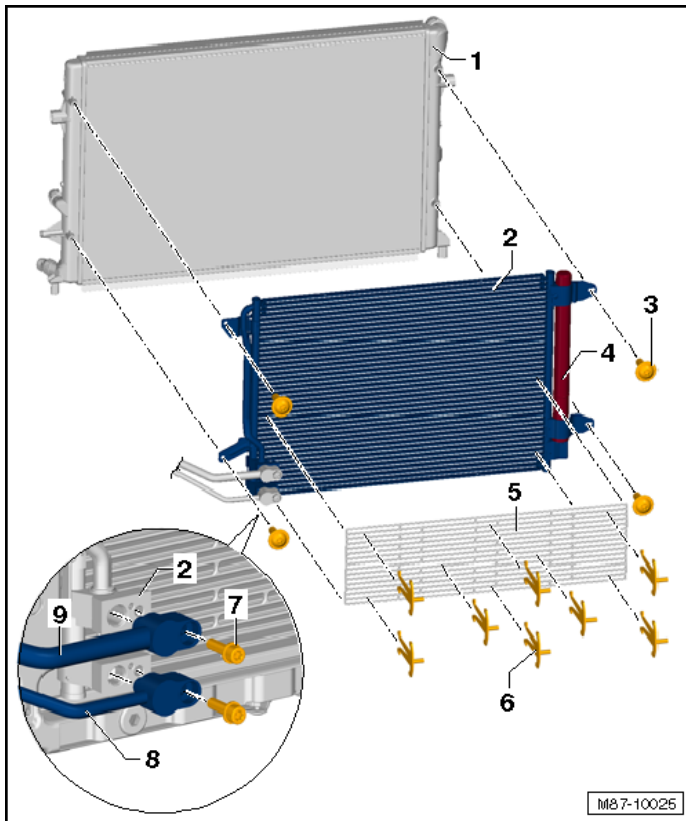
Heating, Ventilation

Fastener Tightening Specifications

Component	Nm
Air guide channel-to-instrument panel	1.5
Air intake shroud	2.5
Auxiliary heater heating element	2
Auxiliary heater heating element ground cable nut	9
Center and side air vents intermediate piece-to-instrument panel and vents	1.5
Coolant pipes and heater core cover	2
Dash panel coolant line bracket	2
Expansion valve heat shield	10
Footwell vents	1.5
Front heat and fresh air controls	1.5
Heater and A/C housing-to-instrument panel cross-member	9
Heater core hose clamp	2
Refrigerant line bolts	10

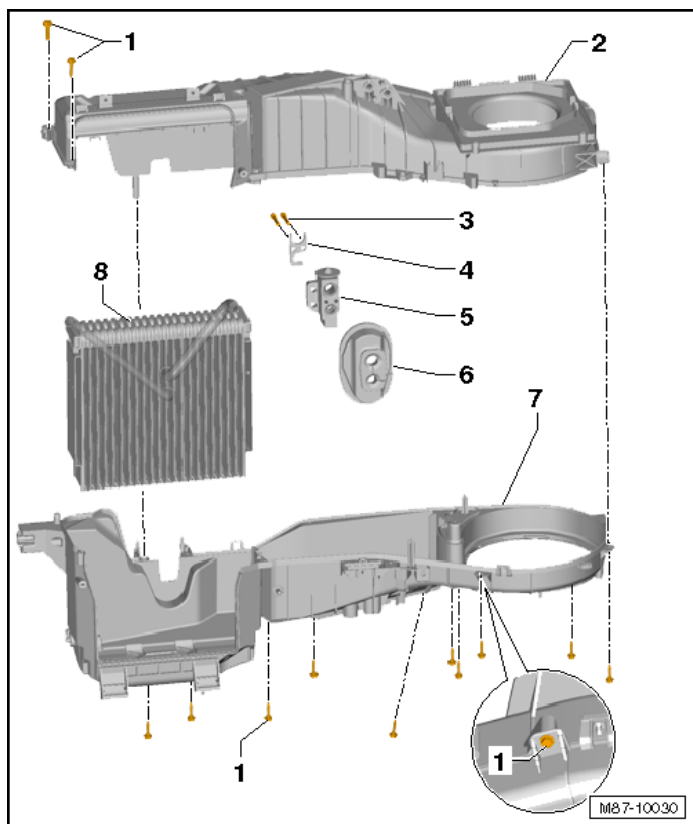
Air Conditioning

Condenser Overview



- 1 - Radiator
- 2 - Condenser with Dryer Cartridge
- 3 - Bolt
 - 5 Nm
- 4 - Dryer Cartridge
- 5 - Grille
- 6 - Clip
- 7 - Bolt
 - 12 Nm
- 8 - Refrigerant Line
 - High pressure line
- 9 - Refrigerant Line
 - Low pressure line

Evaporator Housing Overview



1 - Bolt

- 1.5 Nm

2 - Evaporator Housing Upper Section

3 - Bolts

- 5 Nm

4 - Threaded Plate

5 - Expansion Valve

6 - Seal/Insulation

7 - Evaporator Housing Lower Section

8 - Evaporator

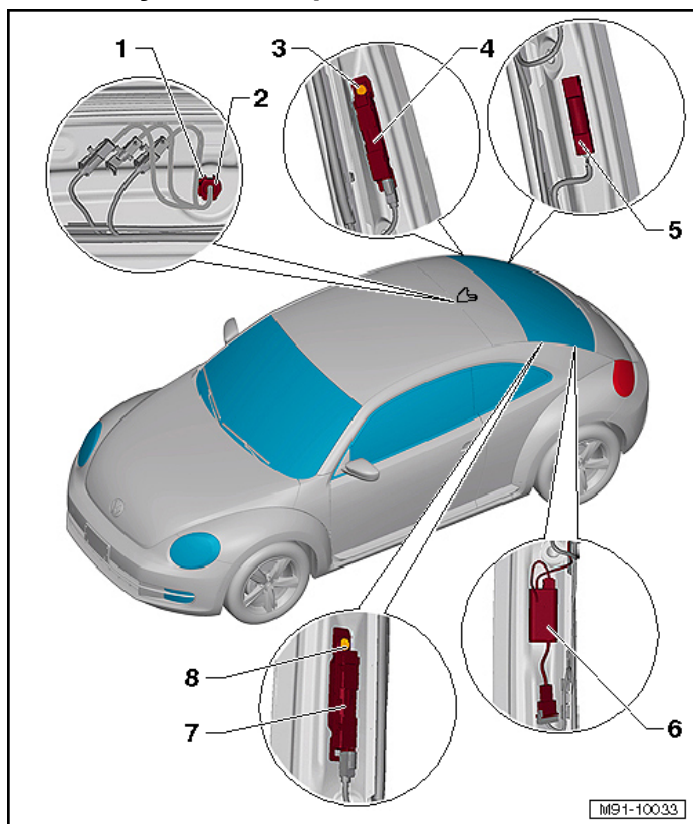
Fastener Tightening Specifications

Component	Nm
A/C compressor bolts	25
A/C compressor drive plate	35
Dryer cartridge bolt	2
Dryer cartridge bracket bolt	2
Expansion valve heat shield	10
Fresh air blower control module	2
Fresh air/recirculating air/back pressure door motor	1.5
Front A/C controls	1.5
Front air distribution door motor	1.5
Heater and A/C housing-to-instrument panel cross member	9
High pressure sensor	8
Left temperature door motor	1.5
Radiator to lock carrier bolts	5
Refrigerant lines-to-A/C compressor	22
Refrigerant lines-to-expansion valve	10
Right temperature door motor	1.5

ELECTRICAL SYSTEM

Communication

Antenna System Component Location Overview



1 - Roof antenna -R216-

2 - Nut

7 Nm

3 - Bolt

2 Nm

4 - Right antenna module -R109-

5 - FM frequency filter (in negative wire) -R178-

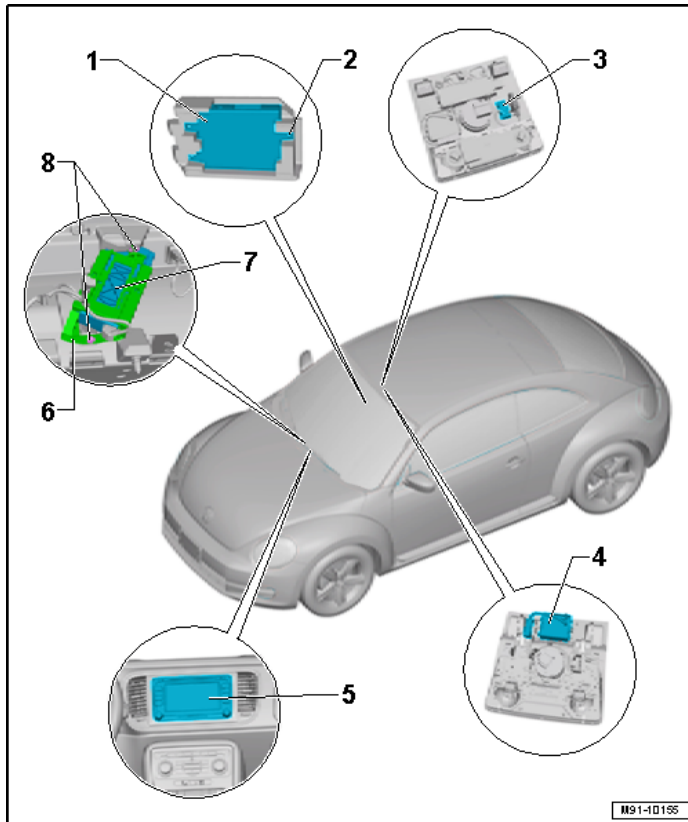
6 - FM frequency filter (in positive wire) -R179-

7 - Left antenna module -R108-

8 - Bolt

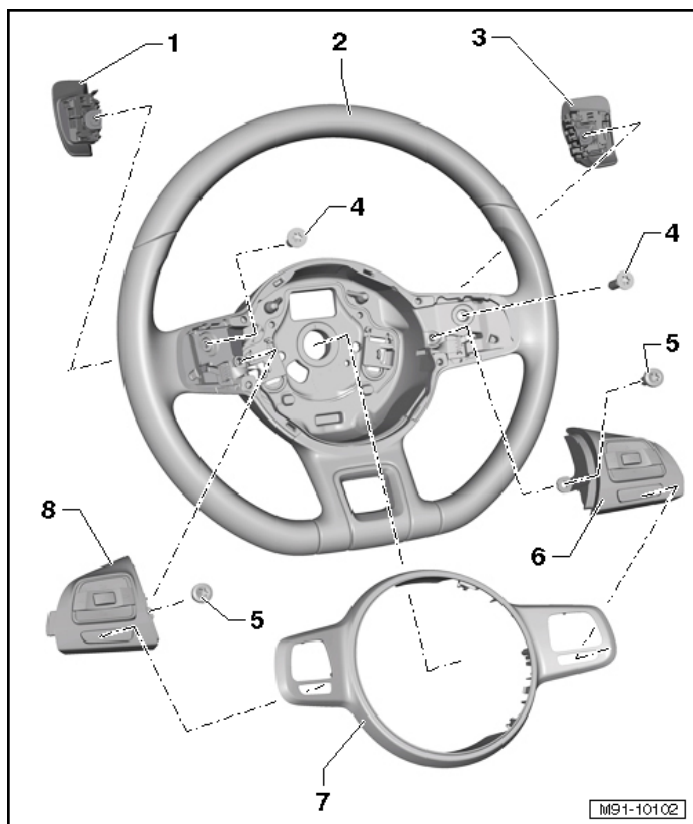
2 Nm

Mobile Online Services Component Location



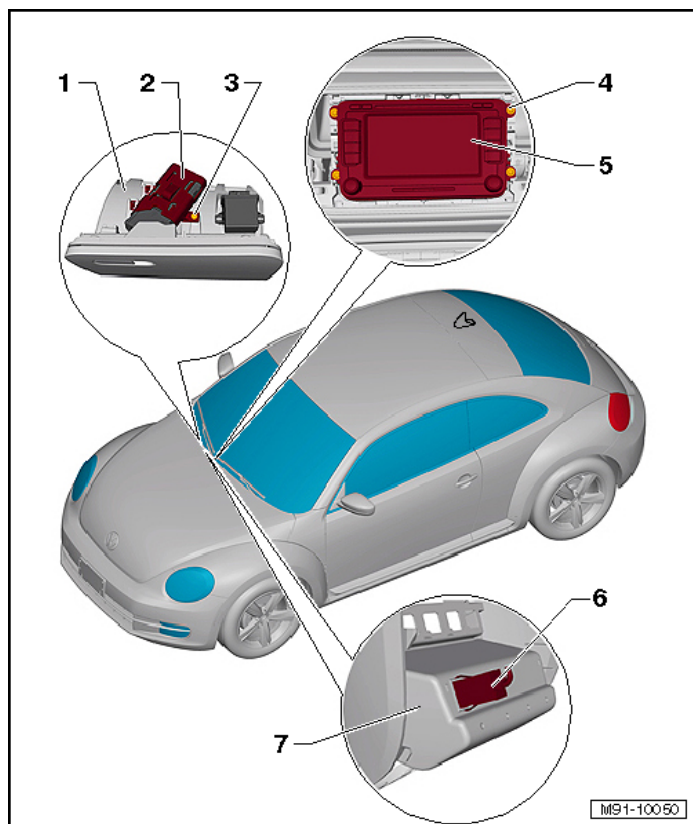
- 1 - Control Module for Emergency Call Module and Communication Unit -J949-
- 2 - Foam Insert
- 3 - Telephone Microphone -R38-
- 4 - Cellular Telephone Preparation Control Head -E508-
- 5 - Radio/RNS
- 6 - Bracket
- 7 - Multimedia System Control Module -J650-, UMI
- 8 - Screw
 - 2 Nm

Multifunction Steering Wheel Overview



- 1 - Steering Wheel Tiptronic Switch, Down -E439-
- 2 - 3-Spoke Steering Wheel
- 3 - Steering wheel tiptronic switch, up -E438-
- 4 - Screw
 - 1.2 Nm
- 5 - Screw
 - 1.2 Nm
- 6 - Multifunction Buttons on the Right Side of the Steering Wheel -E441-
- 7 - Trim
- 8 - Left Multifunction Buttons On Steering Wheel -E440-

Radio Overview



- 1 - Glove compartment
- 2 - Multimedia System Control Module -J650-
- 3 - Screw
 - 1.5 Nm
- 4 - Bolt
 - 1.5 Nm
- 5 - Radio/RNS
- 6 - External Audio Source Connection -R199-
- 7 - Front Center Console

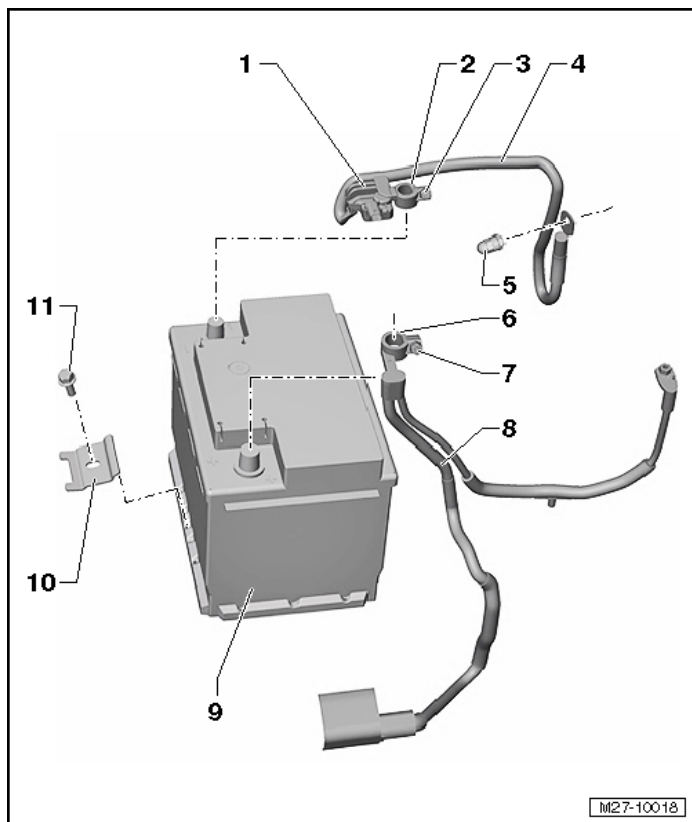
Fastener Tightening Specifications

Component	Nm
Amplifier screws	6
Subwoofer screws	2

Electrical Equipment

Battery, Starter, Generator, Cruise Control

Battery Overview



- 1 - Battery Monitoring Control Module -J367-
- 2 - Ground Cable Battery Terminal
- 3 - Nut
 - 6 Nm
- 4 - Ground Wire To The Body
- 5 - Nut
 - 20 Nm
- 6 - Positive Cable Battery Terminal
- 7 - Nut
 - 6 Nm
- 8 - Positive Connection To The Engine Compartment E-Box
- 9 - Battery -A-
- 10 - Clamping Plate

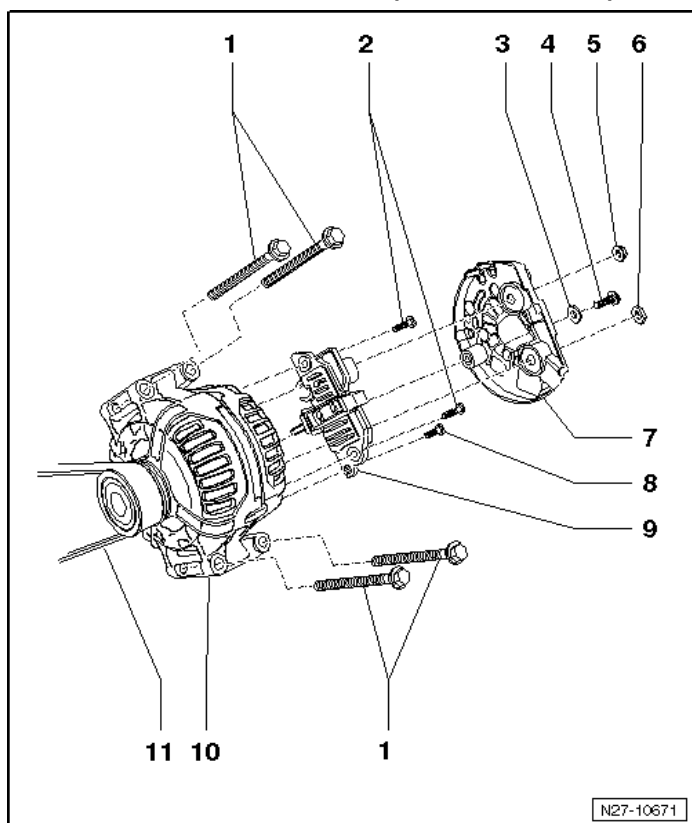
11 - Bolt

- 20 Nm

Not illustrated:

- Battery tray bolts 9 Nm

Generator Overview (2.0L Gasoline)

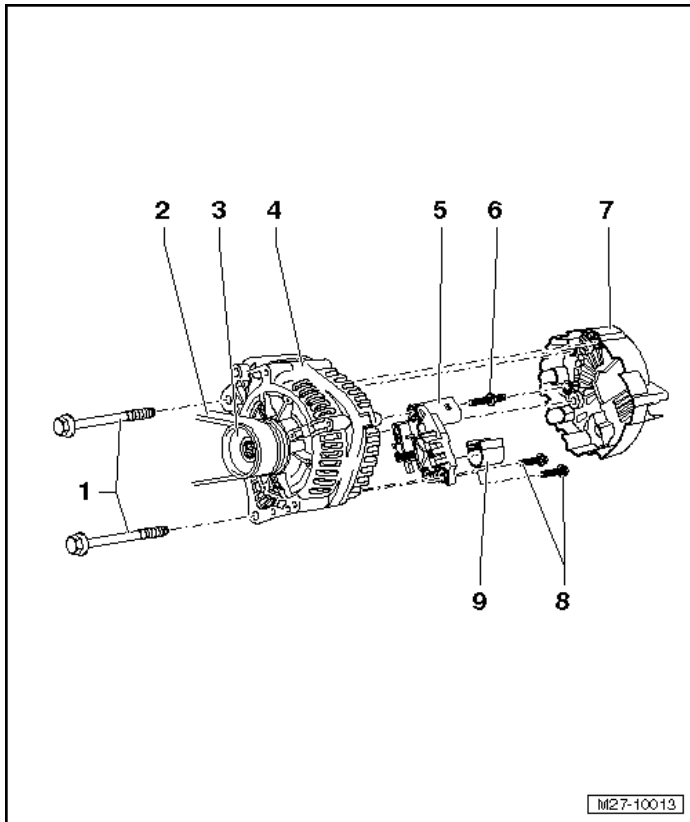


- 1 - Bolt**
 - 20 Nm
- 2 - Bolt**
 - 2 Nm
- 3 - Washer**
- 4 - Bolt**
 - 4.5 Nm
- 5 - Nut**
 - 3.2 Nm
- 6 - Nut**
 - 20 Nm
 - for B+ wire
- 7 - Cap**
- 8 - Bolt**
 - 2 Nm
- 9 - Voltage Regulator -C1-**
- 10 - Generator -C-**
- 11 - Ribbed Belt**

Not illustrated:

- Ribbed belt pulley without freewheel: 65 Nm
- Free-wheeling belt pulley: 80 Nm

Generator Overview (2.5L Gasoline)



1 - Bolt

- 25 Nm

2 - Ribbed Belt

3 - Ribbed Belt Pulley

- Without free wheel: 65 Nm
- With free wheel: 80 Nm

4 - Generator -C-

5 - Voltage Regulator -C1-

6 - Bolt With Washer and Threaded Piece

- 4 Nm

7 - Cap

8 - Bolt

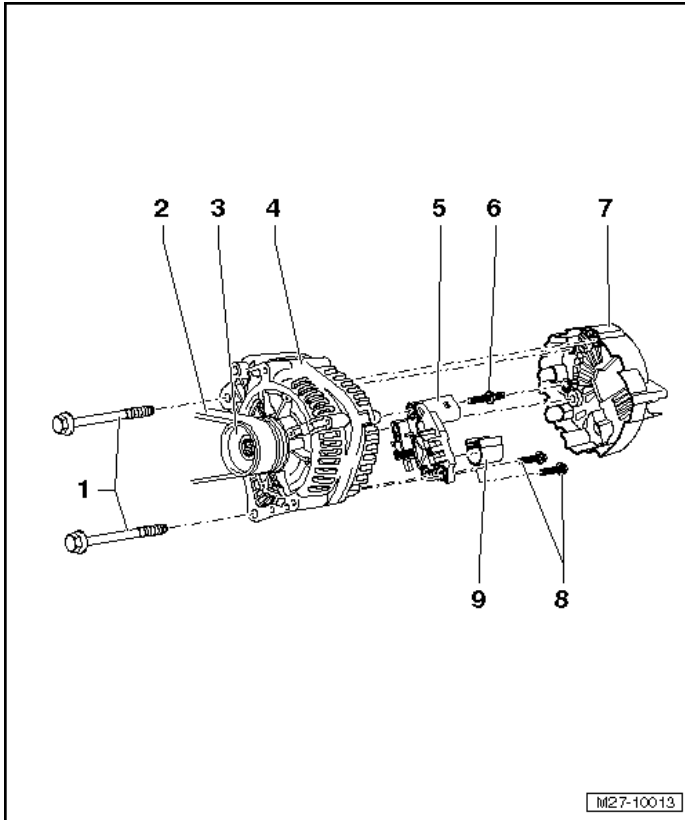
- 2 Nm

9 - Cap for Carbon Brushes

Not illustrated:

- B+ wire nut to rear side of generator: 20 Nm
- Wire bracket nut to the back of the generator: 3.2 Nm

Generator Overview (2.0L Diesel)



1 - Bolt

- 20 Nm

2 - Ribbed Belt

3 - Ribbed Belt Pulley

- Without free wheel: 65 Nm
- With free wheel: 80 Nm

4 - Generator -C-

5 - Voltage Regulator -C1-

6 - Bolt With Washer and Threaded Piece

- 4 Nm

7 - Cap

8 - Bolt

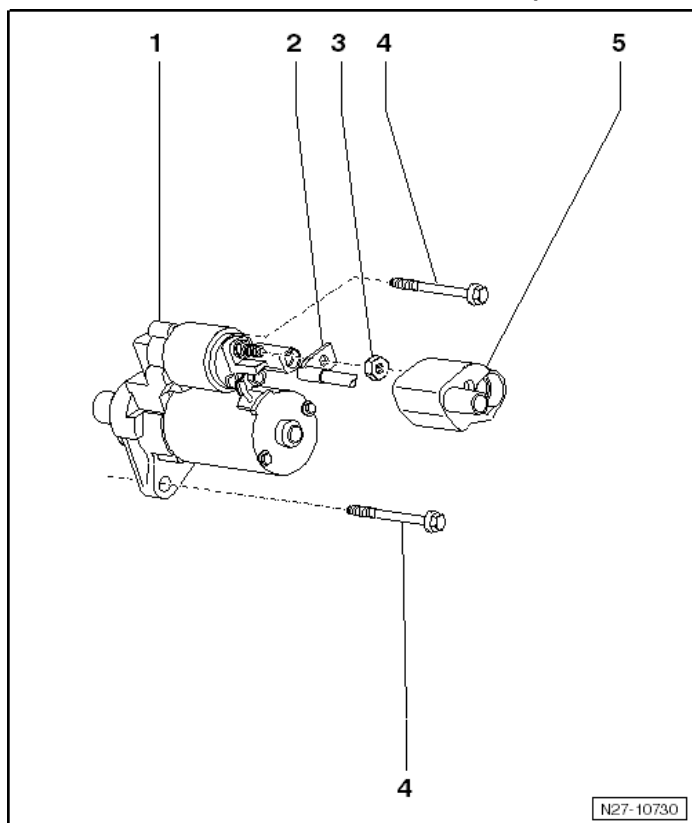
- 2 Nm

9 - Cap for Carbon Brushes

Not illustrated:

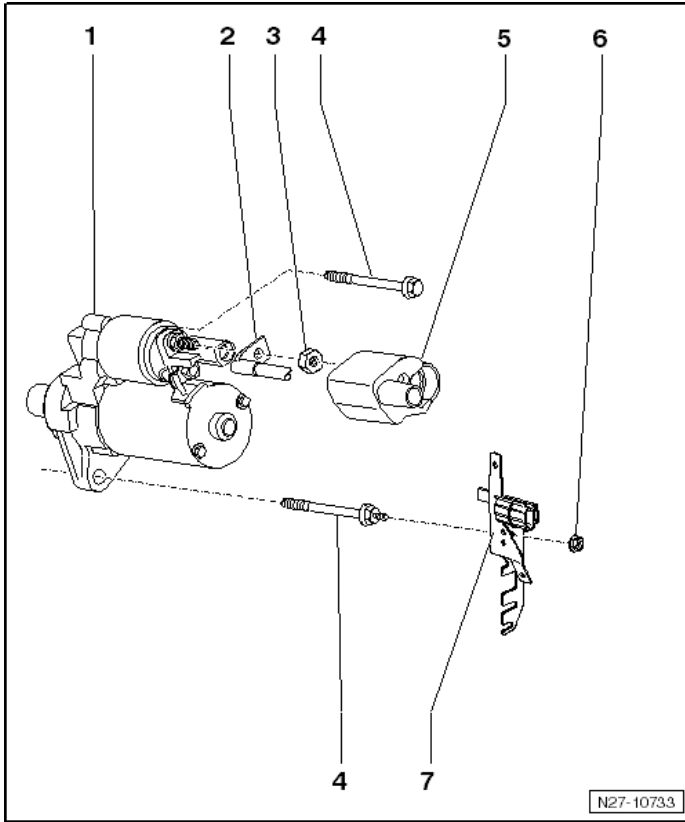
- B+ wire nut to rear side of generator: 20 Nm
- Wire bracket nut to the back of the generator: 3.2 Nm

Starter Overview (Automatic Transmission and DSG®)



- 1 - Starter -B-**
- 2 - Connection, B+ Wire to -B-**
- 3 - Nut**
 - 20 Nm
- 4 - Bolt**
 - M10 = 40 Nm
 - M12 = 75 Nm
- 5 - Cap**

Starter Overview (Manual Transmission)



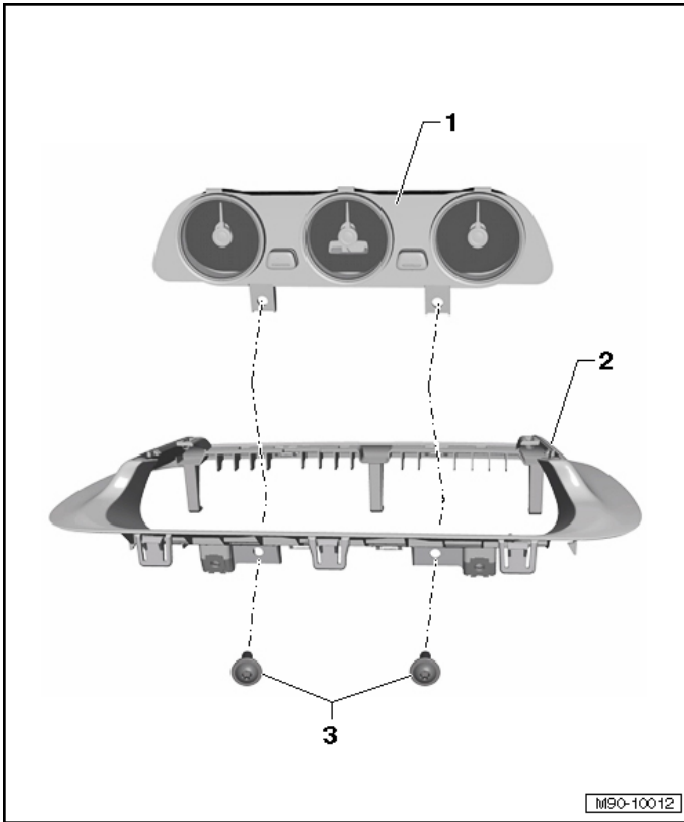
- 1 - Starter -B-
- 2 - Connection, B+ Wire to -B-
- 3 - Nut
 - 20 Nm
- 4 - Bolt
 - 75 Nm
- 5 - Cap
- 6 - Nut
 - 20 Nm
- 7 - Cable Holder

Fastener Tightening Specifications

Component	Fastener size	Nm
Air filter housing-to-body screw	-	10
Generator-to-accessory bracket collar bolts	-	20

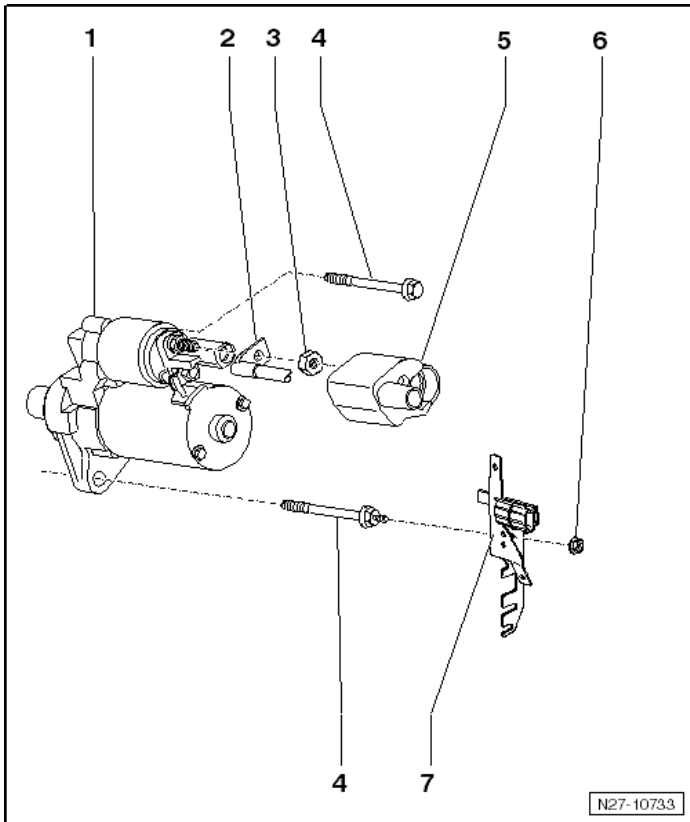
Instruments

Auxiliary Instruments -GX22- Overview



- 1 - Auxiliary Instruments -GX22-
- 2 - Auxiliary Instruments -GX22- trim
 - 1.5 Nm
- 3 - Bolt
 - 1.5 Nm

Horn Overview



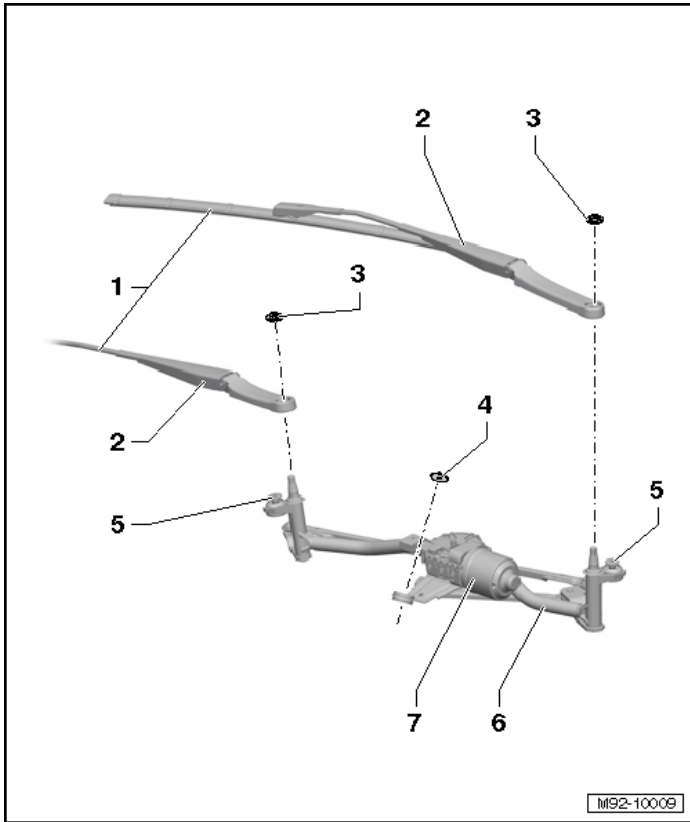
1 - Nut

□ 10 Nm

2 - High Tone Horn -H2- And Low Tone Horn -H7-

Windshield Wiper/Washer System

Windshield Wiper System Overview



Electrical Equip./
Communication

1 - Joint-Free Windshield Wiper

2 - Wiper Arms

3 - Nut

20 Nm

4 - Nut

5 Nm

5 - Bolt

8 Nm

6 - Wiper Frame With Linkage

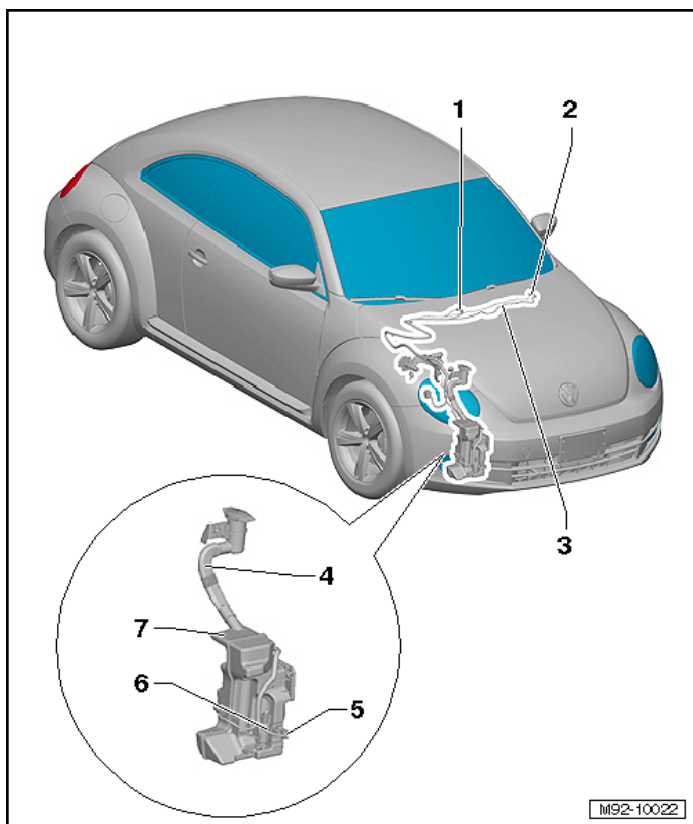
**7 - Windshield Wiper Motor -V- with Wiper Motor Control Module
-J400-**

Not illustrated:

Windshield wiper motor -V- bolts for the wiper frame with linkage:
8 Nm

Windshield wiper motor crank to windshield wiper motor shaft: 18
Nm

Windshield Washer System Overview



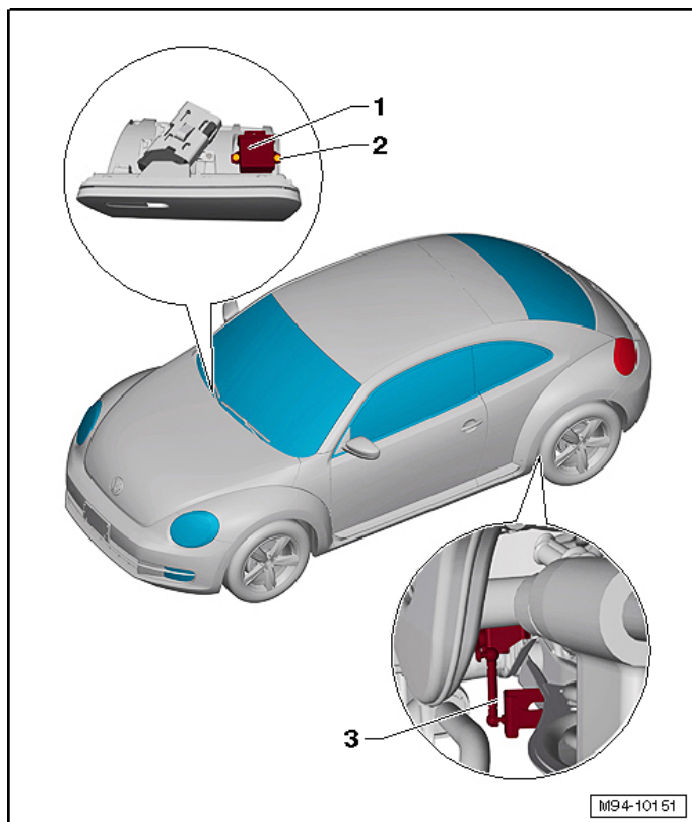
- 1 - Right Windshield Washer Spray Nozzle
- 2 - Left Windshield Washer Spray Nozzle
- 3 - Hose
- 4 - Filler Tube Windshield Washer Fluid Reservoir
 - 5 Nm
- 5 - Windshield Washer Fluid Level Sensor -G33-
- 6 - Windshield Washer Pump -V5-
- 7 - Windshield Washer Fluid Reservoir

Not illustrated:

- Windshield washer fluid reservoir to body: 8 Nm

Exterior Lights, Switches

Automatic Headlamp Range Adjustment Overview



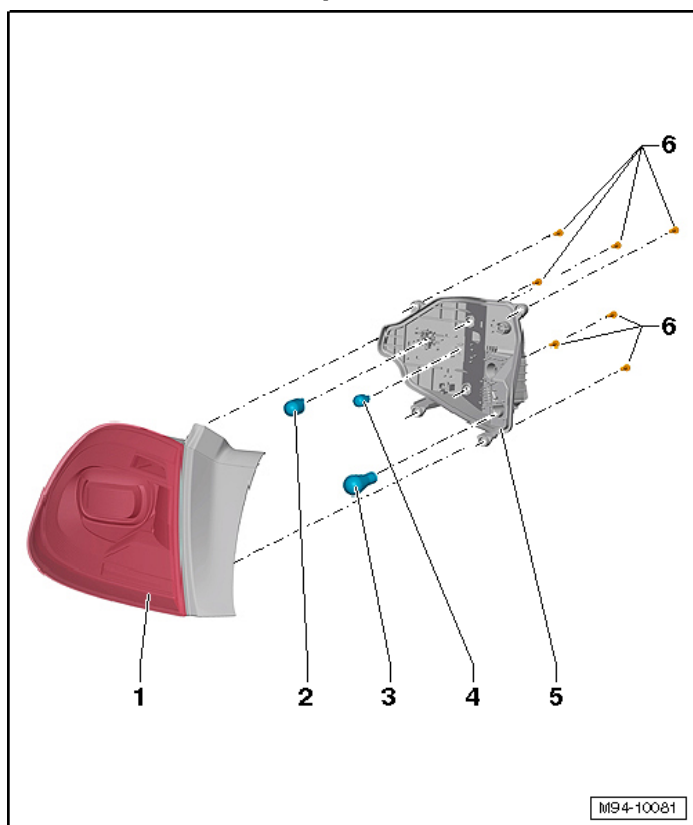
1 - Headlamp Range Control Module -J431-

2- Bolt

2 Nm

3 - Left Rear Level Control System Sensor -G76-

Tail Lamps Overview



1 - Tail Lamp Housing

2 - Left Brake/Tail Lamp Bulb -M21-/Right Brake/Tail Lamp Bulb -M22-

3 - Left Rear Turn Signal Lamp -M6-/Right Rear Turn Signal Lamp -M8-

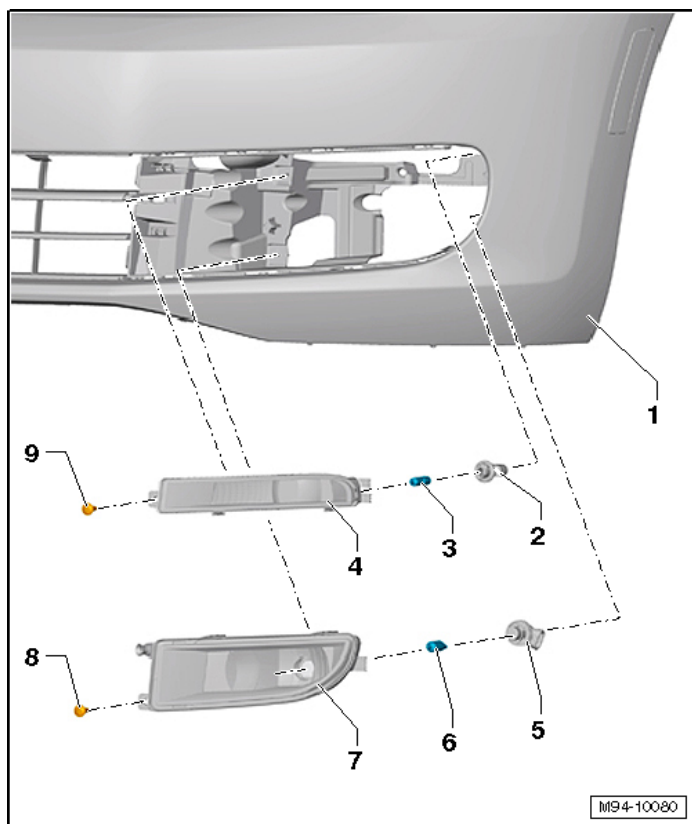
4 - Left Back-Up Lamp -M16-/Right Back-Up Lamp -M17-

5 - Bulb Holder

6 - Bolt

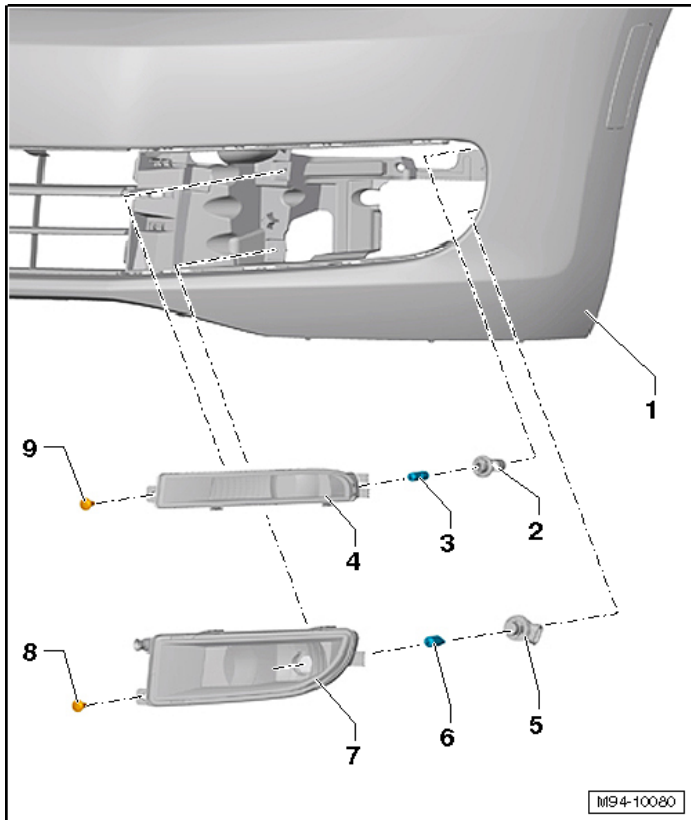
□ 2 Nm

Front Turn Signal Overview



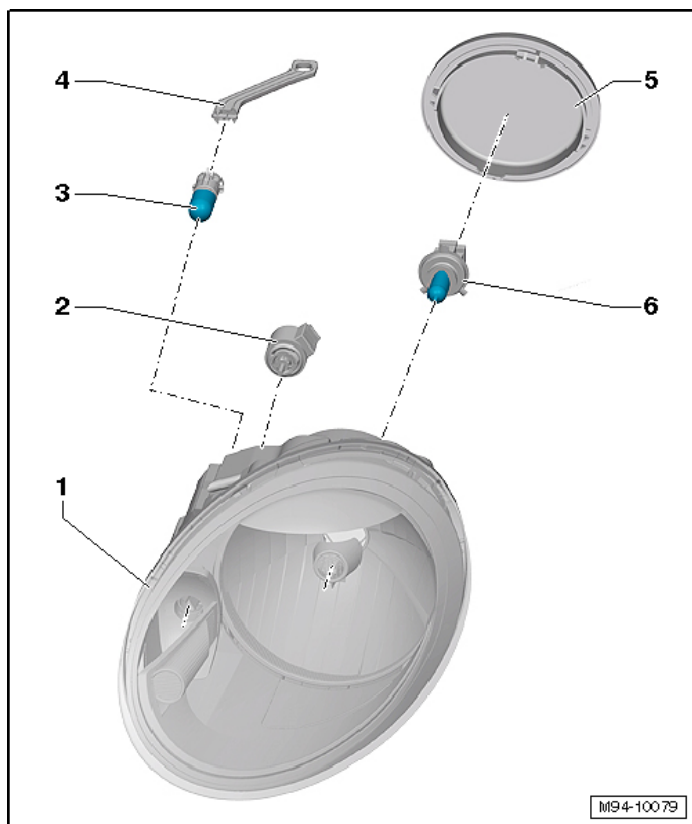
- 1 - Front Bumper Cover
- 2 - Turn Signal Bulb Socket
- 3 - Left Front Turn Signal Lamp -M5-/Right Front Turn Signal Lamp -M7-
- 4 - Turn Signal
- 5 - Fog Lamp Bulb Socket
- 6 - Left Front Fog Lamp -L22-/Right Front Fog Lamp -L23-
- 7 - Fog Lamp Housing
- 8 - Bolt
 - 2 Nm
- 9 - Bolt
 - 2 Nm

Fog Lamps Overview



- 1 - Front Bumper Cover
- 2 - Turn Signal Bulb Socket
- 3 - Left Front Turn Signal Lamp -M5-/Right Front Turn Signal Lamp -M7-
- 4 - Turn Signal
- 5 - Fog Lamp Bulb Socket
- 6 - Left Front Fog Lamp -L22-/Right Front Fog Lamp -L23-
- 7 - Fog Lamp Housing
- 8 - Bolt
 - 2 Nm
- 9 - Bolt
 - 2 Nm

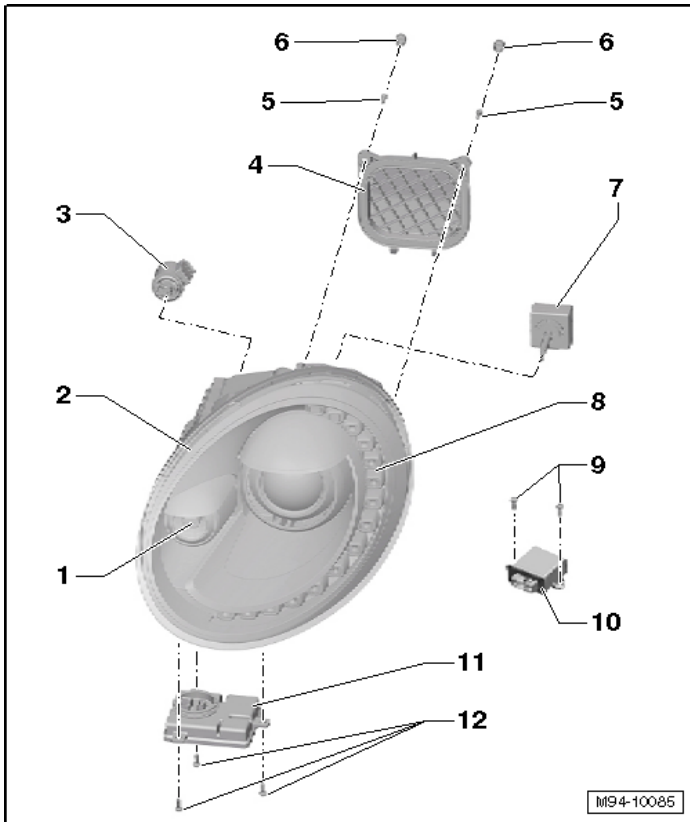
Halogen Headlamps Overview



- 1 - Headlamps
 - 2 - Left Headlamp Beam Adjustment Motor -V48- And Right Headlamp Beam Adjustment Motor -V49
 - 3 - Left Parking Lamp -M1-/Right Parking Lamp -M3-
 - 4 - Retainer
 - 5 - Cap
 - 6 - Left Low Beam Headlamp -M29-/Right Low Beam Headlamp -M31-
- Not illustrated:**

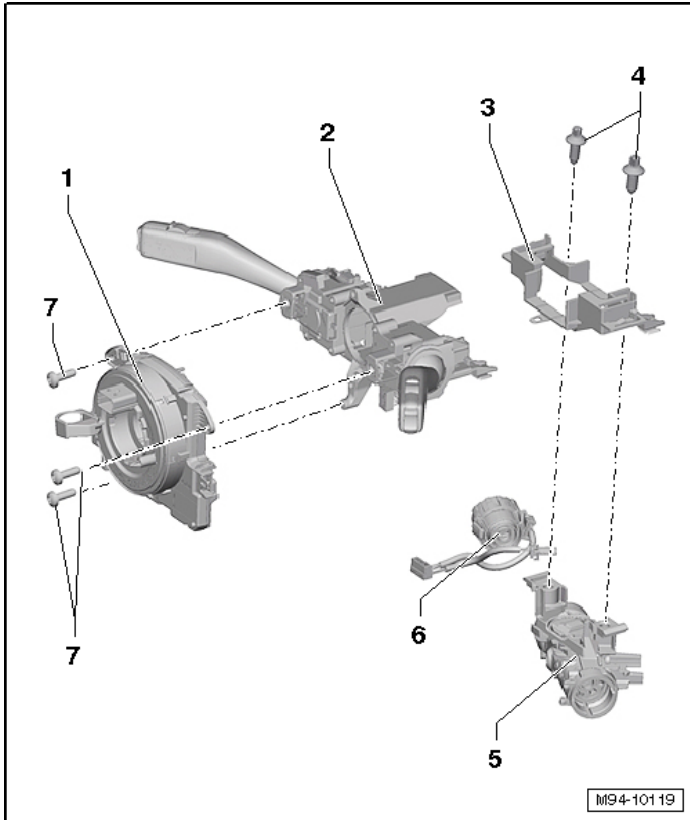
- Carrier plate bolt tightening specification: 4.5 Nm
- Access cover bolt tightening specification: 2 Nm

HID Headlamps Overview



- 1 - Left Parking Lamp -M1-/Right Parking Lamp -M3-
- 2 - Headlamps
- 3 - Left Headlamp Beam Adjustment Motor -V48- And Right Headlamp Beam Adjustment Motor -V49
- 4 - Headlamp Cover
- 5 - Bolt
 - 3 Nm
- 6 - Cap
- 7 - Left HID Headlamp Bulb -L13-/Right Hid Headlamp Bulb -L14-
- 8 - LED Daytime Running Lamps
- 9 - Bolt
 - 1.5 Nm
- 10 - Headlamp Range Control Module -J431-
- 11 - Left High-intensity Gas Discharge Lamp Control Module -J343- and Right High-intensity Gas Discharge Lamp Control Module -J344-
- 12 - Bolt
 - 2 Nm

Steering Column Switch Module Overview, Valeo



1 - Steering Column Electronic Systems Control Module -J527-

2 - Steering Column Combination Switch -E595-

3 - Steering Column Switch Mount

4 - Shear Bolts

Break-off torque: approximately 15 Nm

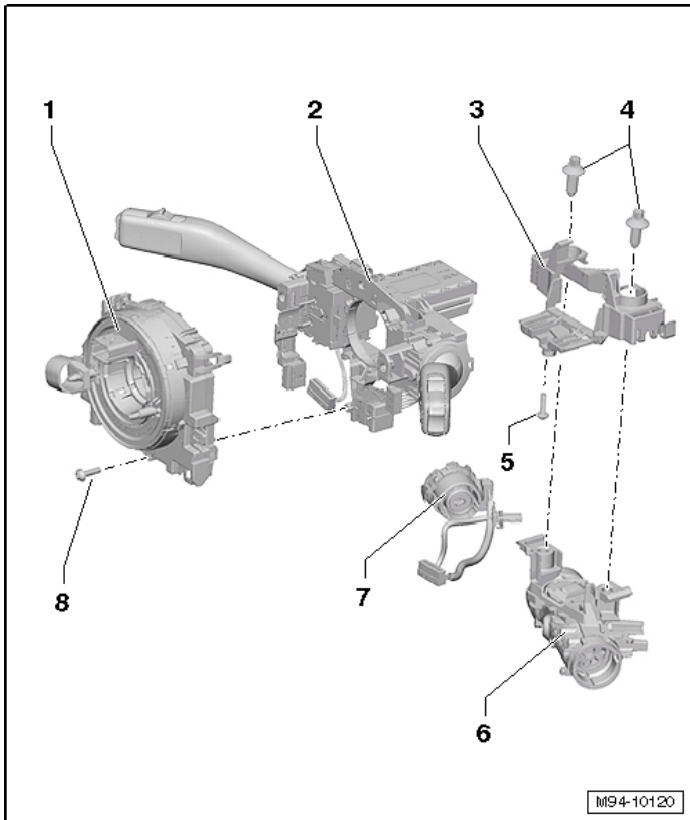
5 - Steering Lock Housing

6 - Ignition Switch -D- and Lock Cylinder

7 - Bolt

1.5 Nm

Steering Column Switch Module Overview, Kostal



1 - Steering Column Electronic Systems Control Module -J527-

2 - Steering Column Combination Switch -E595-

3 - Steering Column Switch Mount

4 - Shear Bolts

Break-off torque: approximately 15 Nm

5 - Bolt

2.5 Nm

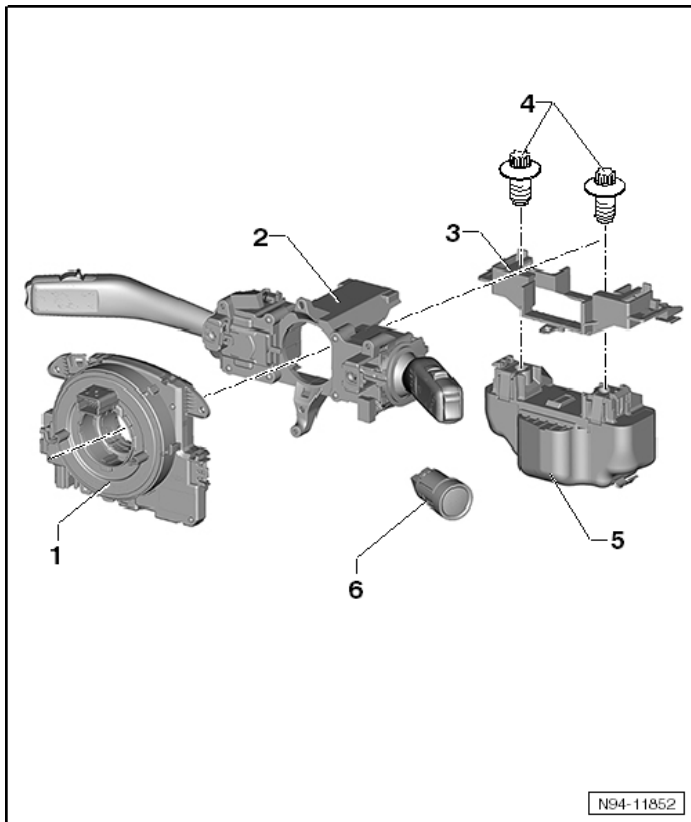
6 - Steering Lock Housing

7 - Ignition Switch -D- and Lock Cylinder

8 - Bolt

1.5 Nm

Steering Column Switch Module with KESSY Overview



1 - Steering Column Electronic Systems Control Module -J527-

□ 1.5 Nm

2 - Steering Column Combination Switch -E595-

3 - Steering Column Switch Mount

4 - Shear Bolts

□ Break-off torque: approximately 15 Nm

5 - Electronic Steering Column Lock Control Module -J764-

6 - Access/Start Authorization Button -E378-

Interior Lights, Switches

Fastener Tightening Specifications

Component	Nm
Alarm Horn Nut	10
Front interior lamp -W1- to the bracket inside the headliner	2

Wiring

Fastener Tightening Specifications

Component	Nm
Driver Footwell Fuse Panel	1.5
E-Box Bolt	6
E-Box Nuts	6
E-Box Wire Nuts	6

Left E-box in the Engine Compartment Tightening Specification

Component	Fastener Size	Nm
Nuts	M5	4
Nuts	M6	6