

# 2014 Volkswagen Touareg Quick Reference Specification Book

## TABLE OF CONTENTS

<b>General Information .....</b>	<b>1</b>
Decimal and Metric Equivalents .....	1
Distance/Length .....	1
Tightening Torque .....	2
Nm-to-lb·ft (ft·lb) .....	2
Nm-to-lb·in (in·lb), kg·cm .....	3
N·cm-to-lb·in (in·lb), kg·cm .....	3
kg·cm-to-lb·in (in·lb), N·cm .....	4
Warnings and Cautions .....	4
<b>WARNINGS</b> .....	4
<b>CAUTIONS</b> .....	7
<b>Vehicle Identification.....</b>	<b>9</b>
Vehicle Identification Number (VIN) Location .....	9
VIN Decoder .....	10
Vehicle Data Label Location .....	11
<b>Sales Codes .....</b>	<b>12</b>
Engine Codes .....	12
Transmission Codes .....	12
<b>Vehicle Lifting .....</b>	<b>13</b>
Hoist and Jack Mounting Points .....	13
Front .....	13
Rear .....	14

## CHASSIS

<b>Suspension, Wheels, Steering .....</b>	<b>16</b>
Front Suspension .....	16
Subframe Overview .....	16
Front Wheel Suspension, Lower Control Arm and Upper Control Arm Overview .....	18
Wheel Bearing Overview, 17" Suspension .....	20
Wheel Bearing Overview, 18" Suspension .....	22
Stabilizer Bar Overview .....	24
Steel Spring Shock Absorber Overview.....	26

Air Spring Damper Overview .....	27
Drive Axle Overview .....	28
Rear Suspension .....	30
Subframe and Stone Impact Protection Overview.....	30
Transverse Link and Tie Rod Overview.....	32
Wheel Bearing Overview .....	34
Rear Suspension Overview .....	36
Stabilizer Bar Overview .....	38
Steel Spring Shock Absorber Overview.....	40
Rear Air Spring Damper Overview .....	42
Drive Axle Overview .....	44
Front Level Control System Sensor Overview.....	45
Rear Level Control System Sensor Overview .....	46
Compressor with Adaptive Suspension Valve Block Overview .....	48
Wheels, Tires .....	50
Tire Pressure Sensor and Metal Valve Component Overview .....	50
Fastener Tightening Specifications.....	51
Wheel Alignment Data .....	51
Wheel Alignment Specified Values .....	51
Steering .....	53
Steering Wheel with Airbag Overview .....	53
Steering Column Overview.....	54
Power Steering Overview .....	56
Power Steering Gear Overview .....	58
Power Steering Pump Overview.....	59
Hydraulic Lines Overview .....	60
<b>Brake System.....</b>	<b>61</b>
General Information .....	61
Vehicle Data Label.....	61
Front Brakes .....	62
Rear Brakes.....	62
Brake Master Cylinder and Brake Booster .....	62
Front Brakes, Brembo 17 Inch.....	63
Front Brakes, Brembo 18 Inch.....	64
Rear Disc Brakes.....	65
Drum Parking Brake .....	66
Anti-lock Brake System (ABS).....	68
Hydraulic Unit Overview, ABS MK 25 .....	68
Front Wheel Speed Sensor Overview .....	70
Rear Wheel Speed Sensor Overview.....	71

Mechanical Components .....	72
Front Brakes Overview, Brembo 17", 1LE .....	72
Front Brakes Overview, Brembo 18", 1LJ .....	74
Rear Brakes Overview .....	76
Hydraulic Lines Overview .....	77
Hydraulic Lines Overview .....	78
Hydraulic Components .....	80
Front Brake Caliper Overview, Brembo 17", 1LE .....	80
Front Brake Caliper Overview, Brembo 18", 1LJ .....	81
Rear Brake Caliper Overview .....	82
Brake Booster/Brake Master Cylinder Overview .....	84
<b>Body.....</b>	<b>86</b>
Air Gap Body Dimensions .....	86
Body, Front .....	86
Body, Center .....	87
Body, Rear .....	88
Body Exterior .....	90
Body Front .....	90
Front Fender Assembly Overview .....	90
Plenum Chamber Bulkhead Assembly Overview .....	92
Noise Insulation Assembly Overview .....	93
Underbody Trim Assembly Overview .....	94
Deformation Element Assembly Overview .....	95
Deformation Angle Bracket Assembly Overview .....	96
Hood, Lids .....	97
Actuating Lever Assembly Overview .....	97
Gas-Filled Strut Assembly Overview .....	98
Rear Lid Drive Motor Assembly Overview .....	99
Rear Lid Hinge Assembly Overview .....	100
Fuel Filler Door Unit and Actuator Assembly Overview .....	101
Front Doors, Central Locking System .....	102
Door Hinge Assembly Overview .....	102
Front Door Assembly Overview .....	104
Door Handle and Door Lock Assembly Overview .....	106
Rear Doors .....	108
Door Hinge Assembly Overview .....	108
Rear Door Assembly Overview .....	110
Door Handle and Door Lock Assembly Overview .....	112
Sunroof .....	114
Panorama Sunroof Assembly Overview .....	114

Bumpers .....	116
Front Bumper Cover Assembly Overview .....	116
Front Bumper Carrier Assembly Overview .....	117
Rear Bumper Cover Assembly Overview .....	118
Trailer Hitch Assembly Overview .....	119
Tow Hitch Assembly Overview .....	120
Glass, Window Regulators .....	121
Fixed Door Glass Assembly Overview .....	121
Tightening Specifications .....	121
Exterior Equipment .....	122
Front Wheel Housing Liner Assembly Overview .....	122
Left Rear Wheel Housing Liner Assembly Overview .....	124
Exterior Mirror Assembly Overview .....	126
Roof Rail Assembly Overview .....	128
Body Interior .....	129
Interior Equipment .....	129
Tightening Specifications .....	129
Passenger Protection, Airbags, Seat Belts .....	130
Rear Center Seat Belt Assembly Overview .....	130
Tightening Specifications .....	131
Interior Trim .....	131
Tightening Specifications .....	131
Seat Frames .....	132
Backrest Adjustment Motor Assembly Overview .....	132
Seat Height Adjustment Motor Assembly Overview .....	133
Seat Angle Adjustment Motor Assembly Overview .....	134
Lower Seat Frame Assembly Overview .....	135
Tightening Specifications .....	136
<b>Heating and Air Conditioning .....</b>	<b>137</b>
General, Technical Data .....	137
Refrigerant Oil Distribution .....	137
Refrigerant R134a Vapor Pressure Table .....	137
Heating, Ventilation .....	138
Fastener Tightening Specification .....	138
Air Conditioning .....	138
Fastener Tightening Specifications .....	138
<b>Electrical System .....</b>	<b>139</b>
Electrical Equipment .....	139
Battery, Starter, Generator, Cruise Control Tightening Specifications .....	139

Instruments Tightening Specifications .....	140
Windshield Wiper/Washer System .....	141
Headlamp Washer System Overview .....	141
Rear Window Wiper System Overview.....	142
Windshield Washer System Overview.....	143
Windshield Wiper System Overview.....	144
Exterior Lights, Switches .....	145
Access/Start Authorization Antennas and Sensors Overview .....	145
Fog Lamps Overview.....	146
Headlamp Mounting Tabs Overview.....	147
HID Headlamp with Cornering Lamp and LED Daytime Running Lamp Overview.....	148
HID Headlamp with Dynamic High Beam Control Overview .....	150
Rear Lid Tail Lamps Overview .....	152
Rear Lid Tail Lamps with LEDs Overview.....	153
Windshield Washer System Overview.....	157
Interior Lights, Switches Tightening Specifications.....	158
Wiring Tightening Specifications.....	158
Electric Drive Tightening Specifications.....	158



# 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.

## WARNINGS *(cont'd)*

- 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.

*(WARNINGS cont'd on next page)*

## WARNINGS *(cont'd)*

- 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.

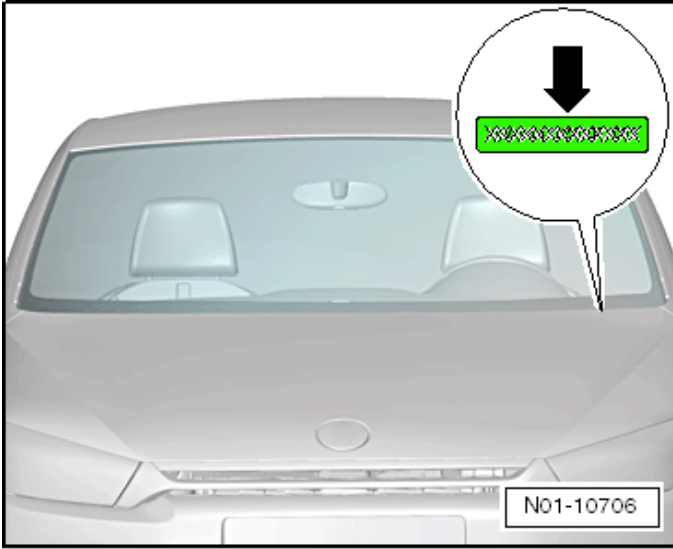
*(CAUTIONS cont'd on next page)*

## **CAUTIONS** *(cont'd)*

- Always make sure the ignition is off before disconnecting battery
- 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



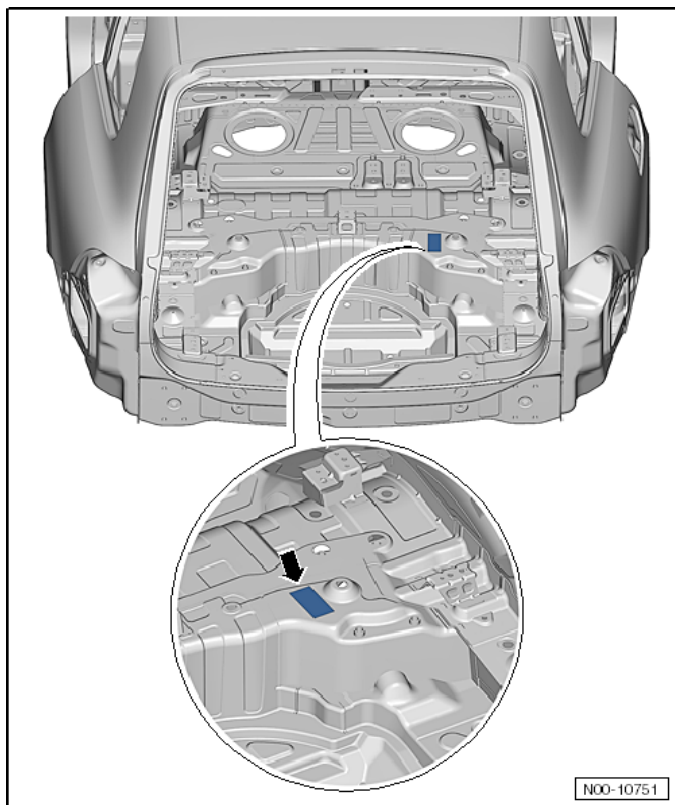
Vehicle  
Identification

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





## Vehicle Data Label Location



The vehicle data label (➡) is above the right spare wheel well.

Vehicle  
Identification

# SALES CODES

## Engine Codes

<b>CNRB</b>	3.0L 6-cylinder TDI
<b>CGFA</b>	3.0L 6-cylinder
<b>CGRA</b>	3.6L 6-cylinder

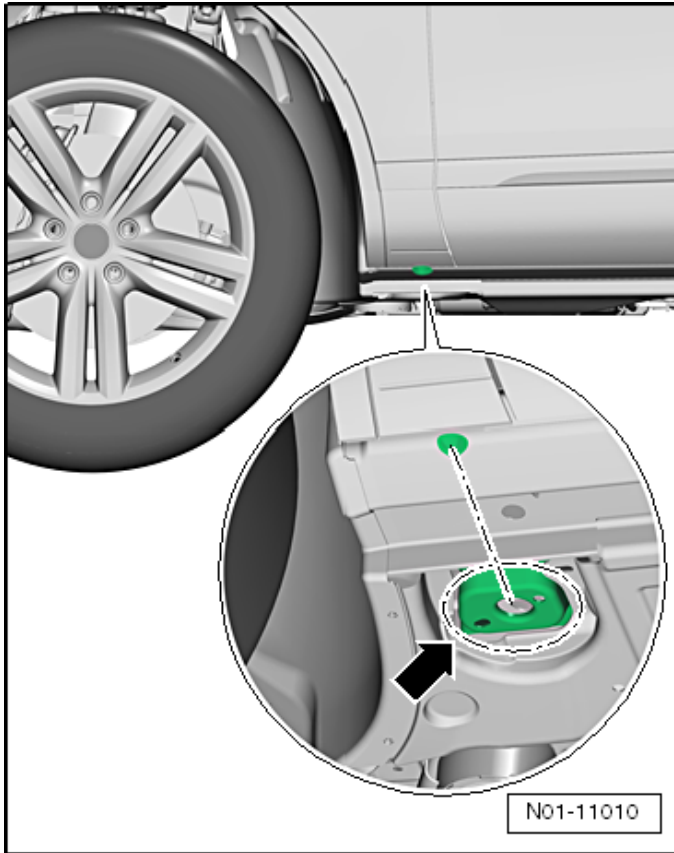
## Transmission Codes

<b>0C8</b>	8-speed automatic transmission
------------	--------------------------------

# VEHICLE LIFTING

## *Hoist and Jack Mounting Points*

Front



Position the support plate on the floor plate longitudinal reinforcement (➡).



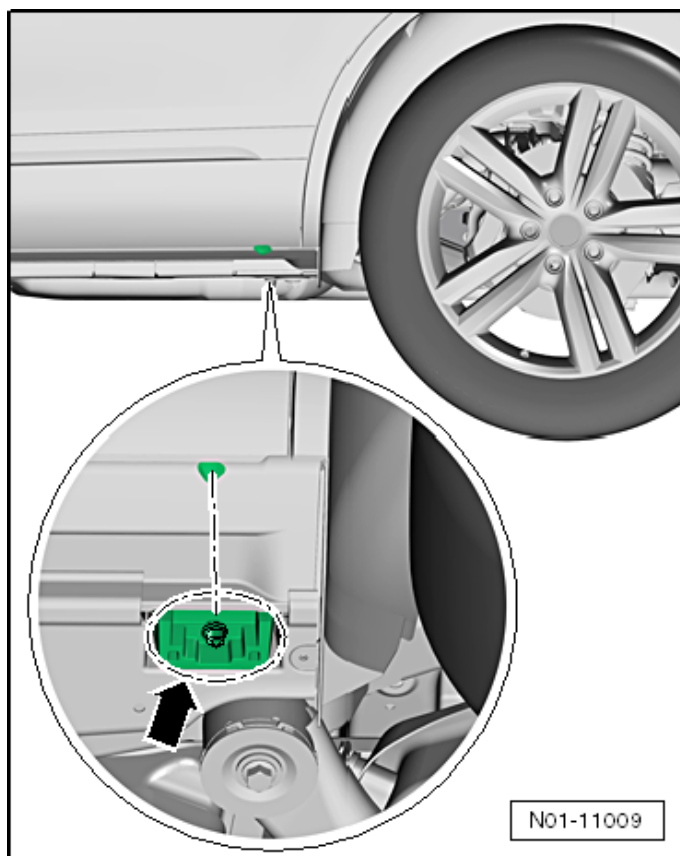
### **WARNING**

Never raise the front of the vehicle by the side member vertical stiffener.

Sales  
Codes

Vehicle  
Lifting

## Rear



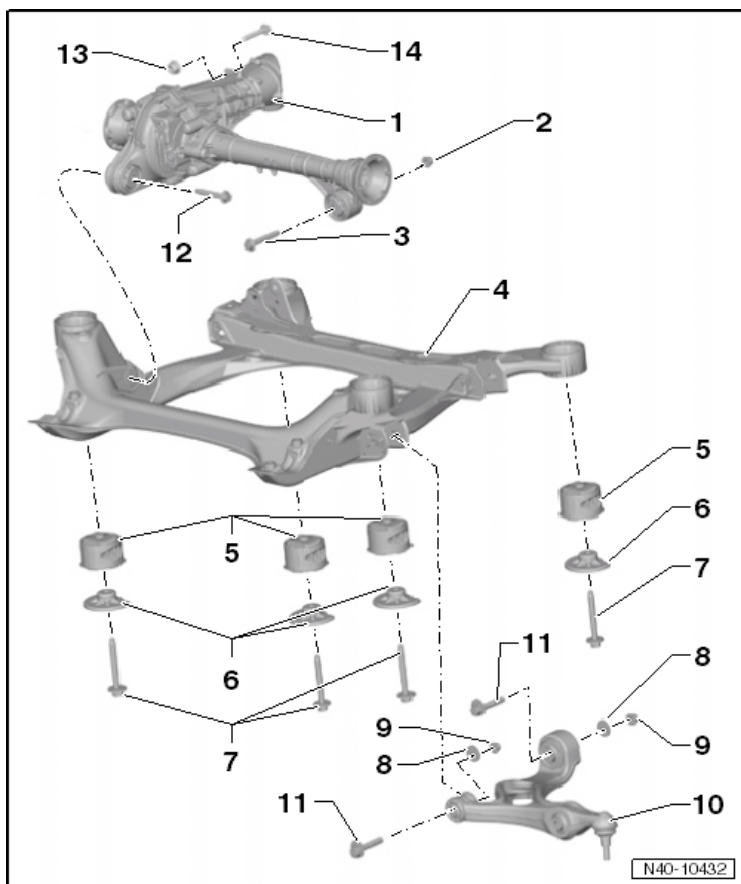
Position the support plate on the floor plate reinforcement near the rear axle (➡).



# SUSPENSION, WHEELS, STEERING

## Front Suspension

### Subframe Overview



**1 - Front Final Drive**

**2 - Bolt**

- 90 Nm + 90° turn
- Always replace if removed

**3 - Bolt**

- Always replace if removed

**4 - Subframe**

**5 - Bonded Rubber Mount**

**6 - Thrust Washer**

**7 - Bolt**

- 120 Nm + 90° turn
- Always replace if removed

**8 - Eccentric Washer****9 - Nut**

- 170 Nm
- Always replace if removed

**10 - Lower Control Arm****11 - Eccentric Bolt****12 - Bolt**

- 90 Nm + 90° turn
- Always replace if removed

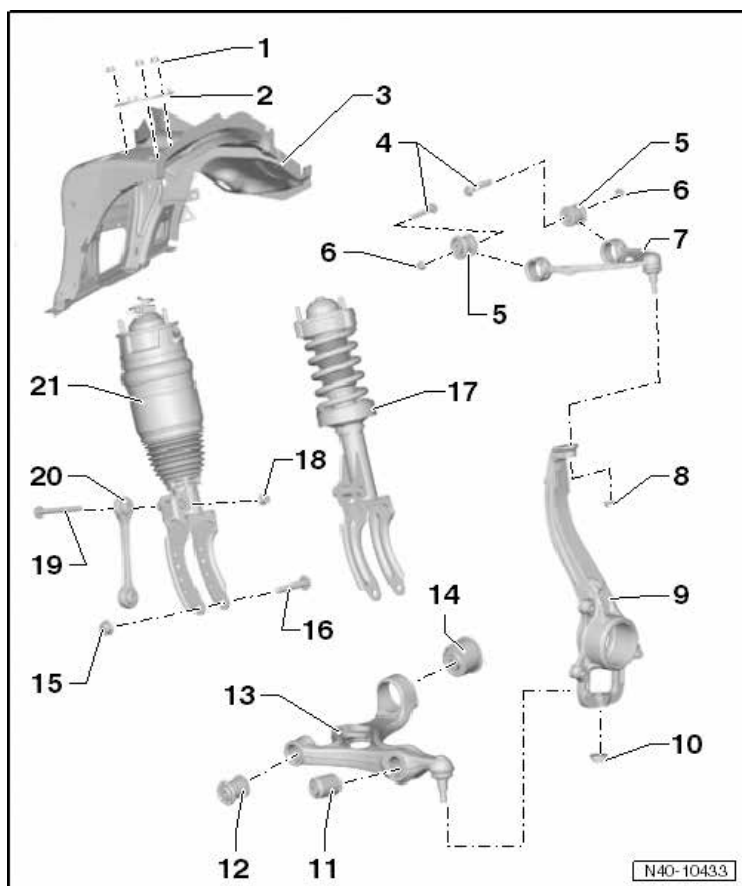
**13 - Nut**

- 90 Nm + 90° turn
- Always replace if removed

**14 - Bolt**

- Always replace if removed

## Front Wheel Suspension, Lower Control Arm and Upper Control Arm Overview



### 1 - Nut

- 60 Nm

### 2 - Ring

### 3 - Front Body

### 4 - Bolt

- 50 Nm + 180° turn
- Always replace if removed

### 5 - Bonded Rubber Mount

### 6 - Nut

- 50 Nm + 180° turn
- Always replace if removed

### 7 - Upper Control Arm

### 8 - Nut

- 85 Nm
- Always replace if removed



**9 - Wheel Bearing Housing**

**10 - Nut**

- 17" suspension (cast steel): 110 Nm
- 18" suspension (cast aluminum): 130 Nm
- Always replace if removed

**11 - Bonded Rubber Mount**

**12 - Bonded Rubber Mount**

**13 - Lower Control Arm**

**14 - Bonded Rubber Mount**

**15 - Nut**

- 150 Nm + 90° turn
- Always replace if removed

**16 - Bolt**

- Always replace if removed

**17 - Steel Spring Shock Absorber**

**18 - Nut**

- 110 Nm
- Always replace if removed

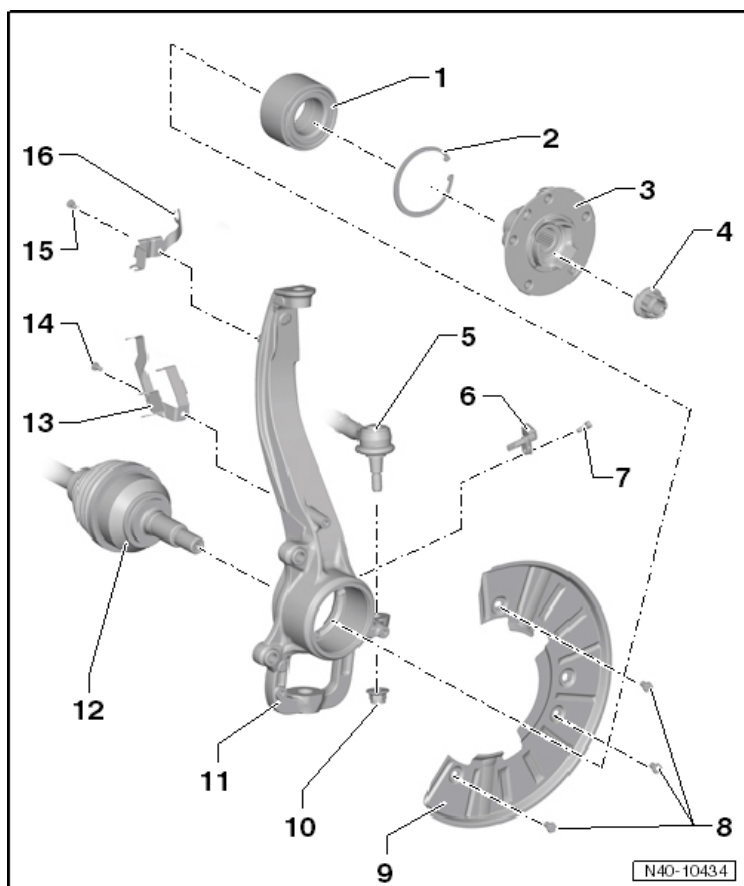
**19 - Bolt**

- 110 Nm
- Always replace if removed

**20 - Coupling Rod**

**21 - Air Spring Shock Absorber**

## Wheel Bearing Overview, 17" Suspension



**1 - Wheel Bearing**

**2 - Securing Ring**

**3 - Wheel Hub**

**4 - Nut**

500 Nm

Always replace if removed

**5 - Tie Rod**

**6 - Front Speed Sensor**

**7 - Bolt**

8 Nm

**8 - Bolt**

20 Nm

**9 - Cover Plate**

**10 - Nut**

90 Nm

Always replace if removed

**11 - Wheel Bearing Housing**

**12 - Drive Axle**

**13 - Cable Bracket**

**14 - Bolt**

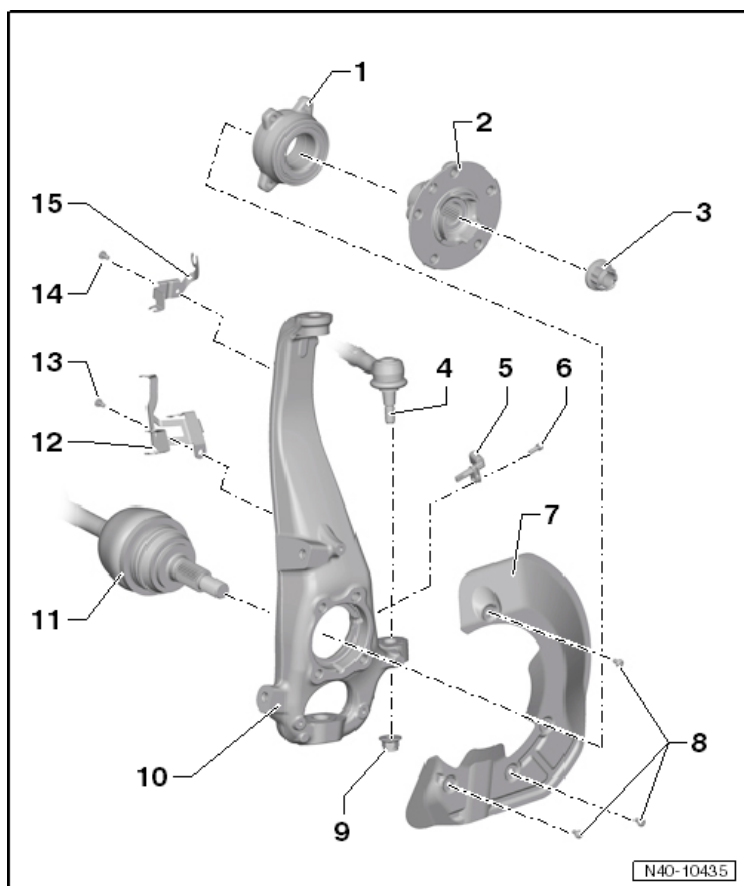
20 Nm

**15 - Bolt**

9 Nm

**16 - Bracket**

## Wheel Bearing Overview, 18" Suspension



**1 - Wheel Bearing**

**2 - Wheel Hub**

**3 - Nut**

500 Nm

Always replace if removed

**4 - Tie Rod**

**5 - Front Speed Sensor**

**6 - Bolt**

8 Nm

**7 - Cover Plate**

**8 - Bolt**

9 Nm

**9 - Nut**

90 Nm

Always replace if removed

**10 - Wheel Bearing Housing**

**11 - Drive Axle**

**12 - Bracket**

**13 - Bolt**

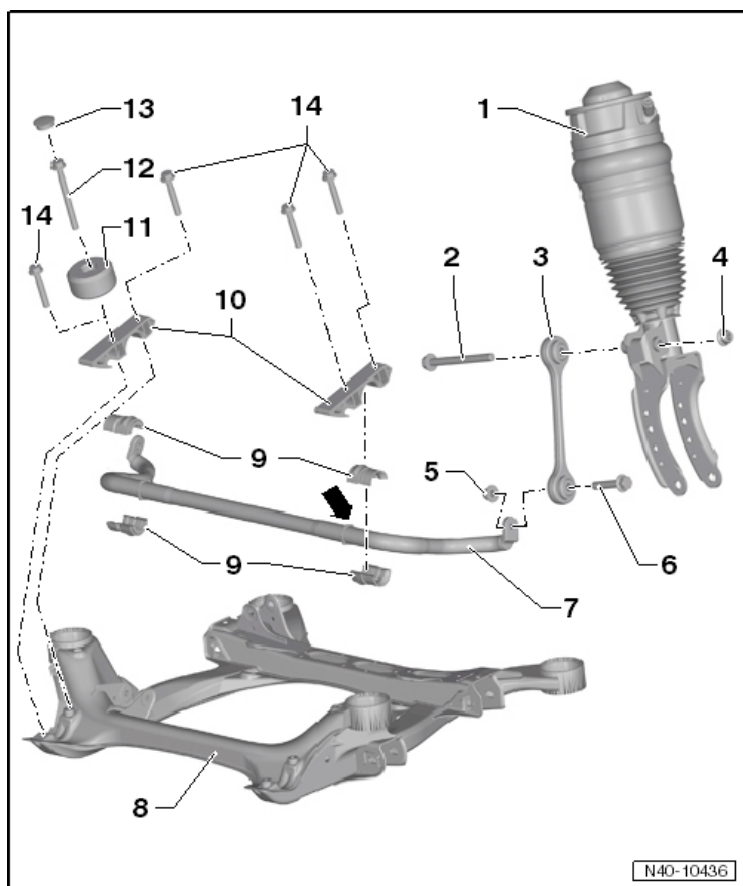
20 Nm

**14 - Bolt**

9 Nm

**15 - Bracket**

## Stabilizer Bar Overview



**1 - Shock Absorbers**

**2 - Bolt**

- Always replace if removed

**3 - Coupling Rod**

**4 - Nut**

- 110 Nm
- Always replace if removed

**5 - Nut**

- 110 Nm
- Always replace if removed

**6 - Bolt**

- Always replace if removed

**7 - Stabilizer Bar**

**8 - Subframe**

**9 - Rubber Mount**

**10 - Clamp**

**11 - Mass Damper**

**12 - Bolt**

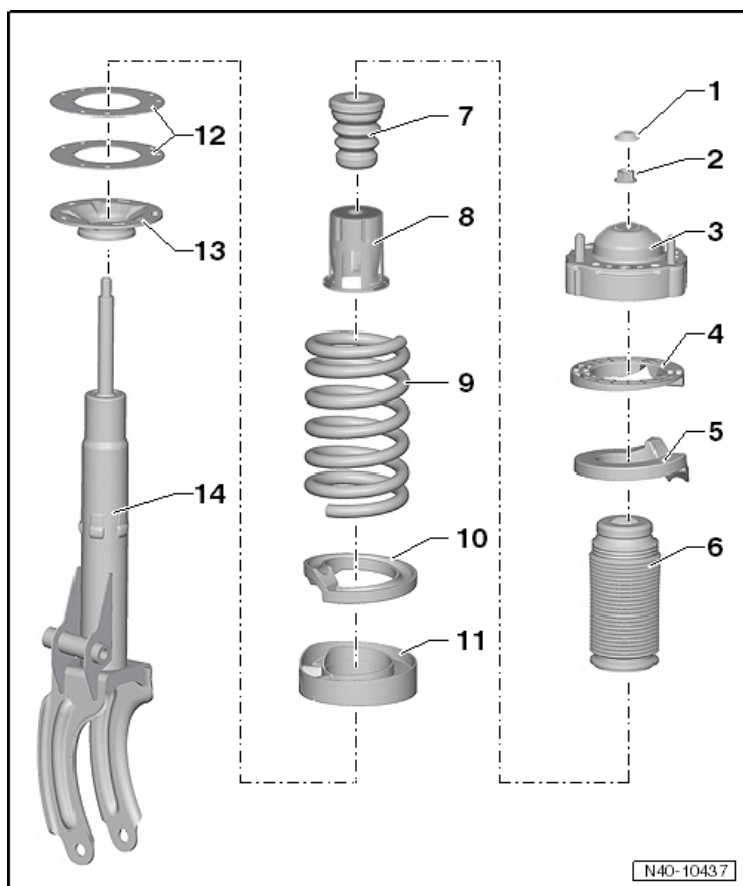
- 60 Nm
- M10 x 105

**13 - Cover**

**14 - Bolt**

- 60 Nm
- M10 x 62

## Steel Spring Shock Absorber Overview



**1 - Plug**

**2 - Nut**

56 Nm

Always replace if removed

**3 - Mount Plate**

**4 - Upper Spring Washer**

**5 - Upper Spring Support**

**6 - Boot**

**7 - Buffer Stop**

**8 - Stop Cap**

**9 - Coil Spring**

**10 - Lower Spring Support**

**11 - Lower Spring Washer**

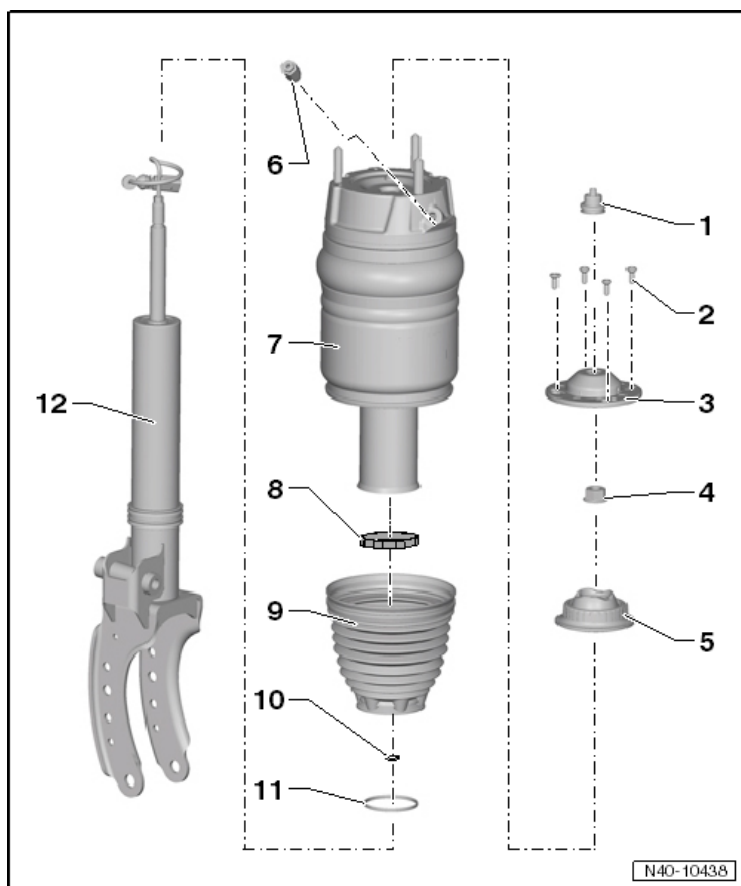
**12 - Spacing Disc**

**13 - Spring Plate**

**14 - Shock Absorbers**

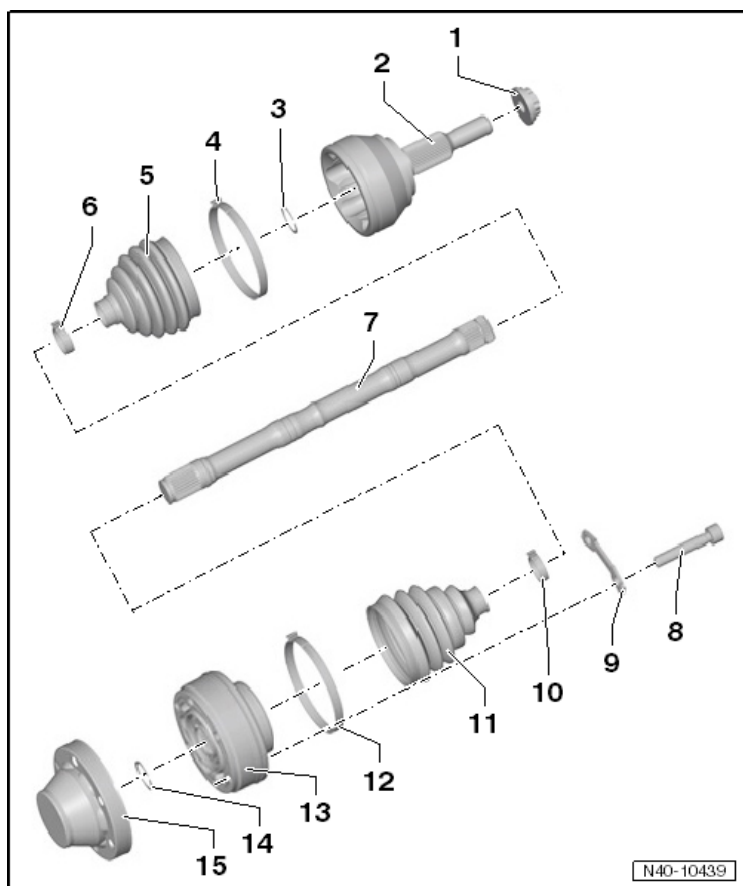


## Air Spring Damper Overview



- 1 - Grommet
- 2 - Bolt
  - 9 Nm
- 3 - Cover
- 4 - Nut
  - 70 Nm
  - Always replace if removed
- 5 - Rubber Mount
- 6 - Pressure-Holding Valve
  - 12 Nm
- 7 - Air Spring
- 8 - Anti-Extraction Device
- 9 - Boot
- 10 - Seal
- 11 - Seal
- 12 - Shock Absorbers

## Drive Axle Overview



**1 - Nut**

- 500 Nm
- Always replace if removed

**2 - Outer CV Joint**

**3 - Securing Ring**

- Always replace if removed

**4 - Clamp**

- Always replace if removed

**5 - Protective Boot**

**6 - Clamp**

- Always replace if removed

**7 - Drive Axle**

**8 - Bolt**

- 50 Nm + 90° turn
- Always replace if removed

**9 - Backing Plate**

**10 - Clamp**

- Always replace if removed

**11 - Protective Boot****12 - Clamp**

- Always replace if removed

**13 - Inner CV Joint****14 - Securing Ring**

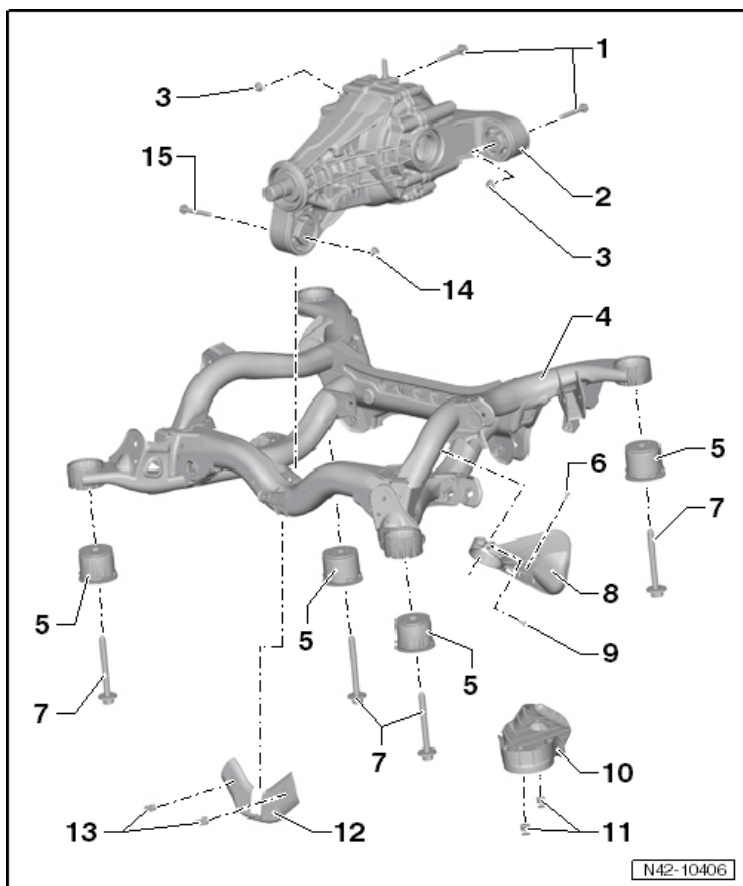
- Always replace if removed

**15 - Cover**

- Always replace if removed

# Rear Suspension

## Subframe and Stone Impact Protection Overview



**1 - Bolt**

- 20 Nm
- Always replace if removed

**2 - Rear Final Drive**

**3 - Nut**

- Always replace if removed

**4 - Subframe**

**5 - Bonded Rubber Mount**

**6 - Bolt**

- 1 Nm

**7 - Bolt**

- 120 Nm + 180° turn
- Always replace if removed

**8 - Stone Protection Plate**

**9 - Bolt**

**10 - Stone Protection Plate**

**11 - Expanding Rivet**

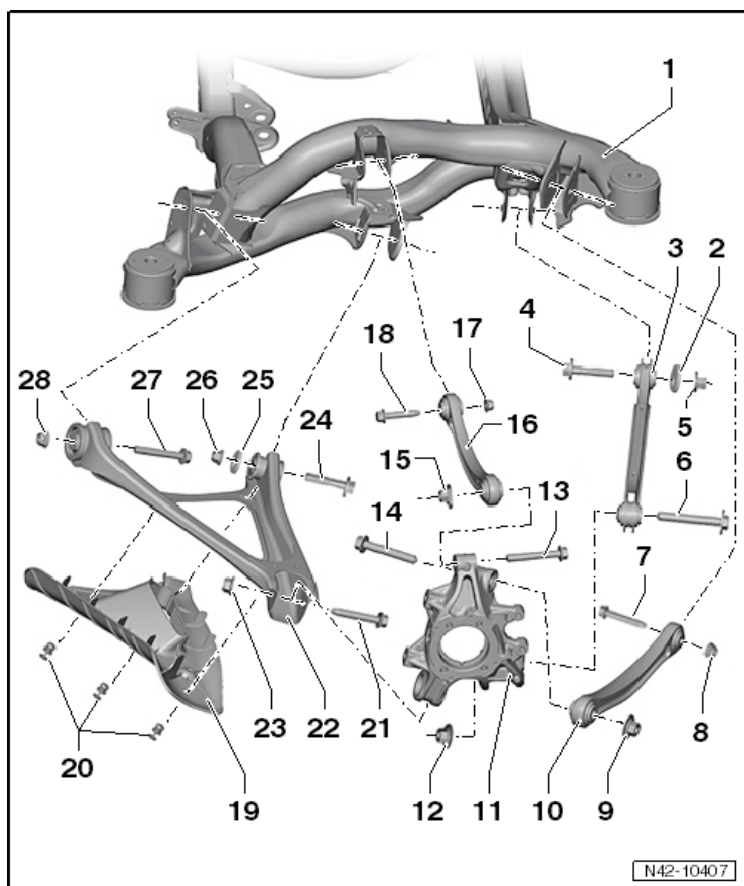
**12 - Stone Protection Plate**

**13 - Expanding Rivet**

**14 - Nut**

- 90 Nm + 90° turn
- Always replace if removed

## Transverse Link and Tie Rod Overview



**1 - Subframe**

**2 - Eccentric Washer**

**3 - Tie Rod**

**4 - Eccentric Bolt**

**5 - Nut**

170 Nm

Always replace if removed

**6 - Bolt**

150 Nm + 90° turn

Always replace if removed

**7 - Bolt**

Always replace if removed

**8 - Nut**

90 Nm + 90° turn

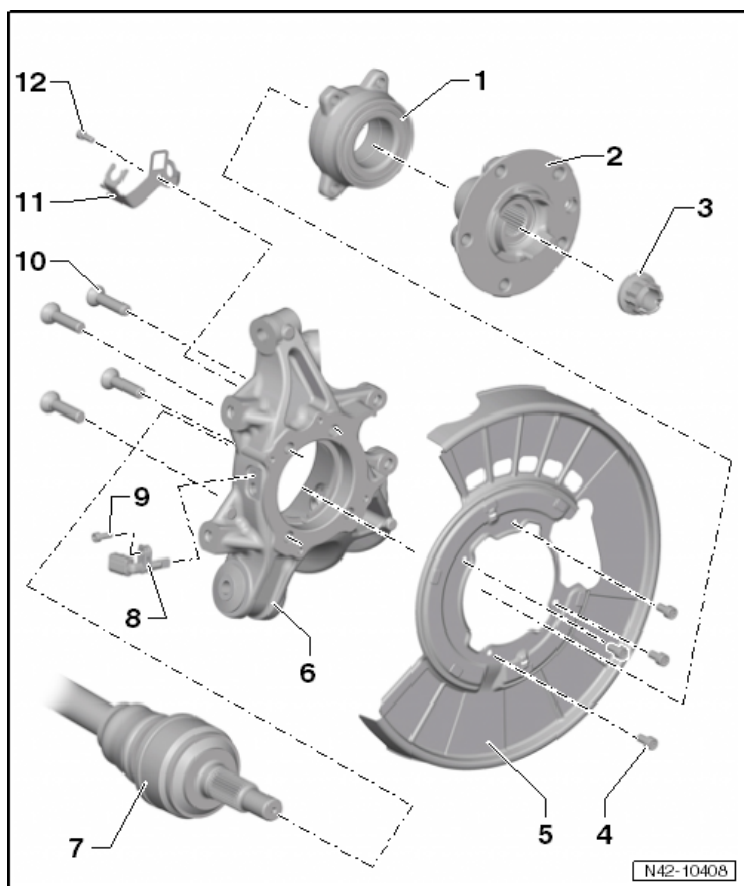
Always replace if removed

**9 - Nut**

Always replace if removed

- 10 - Upper Rear Transverse Link**
- 11 - Wheel Bearing Housing**
- 12 - Nut**
  - Always replace if removed
- 13 - Bolt**
  - 150 Nm + 90° turn
  - Always replace if removed
- 14 - Bolt**
  - 150 Nm + 90° turn
  - Always replace if removed
- 15 - Nut**
  - Always replace if removed
- 16 - Upper Front Transverse Link**
- 17 - Nut**
  - 90 Nm + 90° turn
  - Always replace if removed
- 18 - Bolt**
  - Always replace if removed
- 19 - Stone Protection Plate**
- 20 - Expanding Rivet**
- 21 - Bolt**
  - Always replace if removed
- 22 - Lower Transverse Link**
- 23 - Nut**
  - 150 Nm + 90° turn
  - Always replace if removed
- 24 - Eccentric Bolt**
- 25 - Eccentric Washer**
- 26 - Nut**
  - 170 Nm
  - Always replace if removed
- 27 - Bolt**
  - 150 Nm + 90° turn
  - Always replace if removed
- 28 - Nut**
  - Always replace if removed

## Wheel Bearing Overview



**1 - Wheel Bearing**

**2 - Wheel Hub**

**3 - Nut**

500 Nm

Always replace if removed

**4 - Bolt**

8 Nm

**5 - Brake Carrier Plate**

**6 - Wheel Bearing Housing**

**7 - Drive Axle**

**8 - Rear ABS Wheel Speed Sensor**

**9 - Bolt**

8 Nm

**10 - Bolt**

80 Nm + 120° turn

Always replace if removed

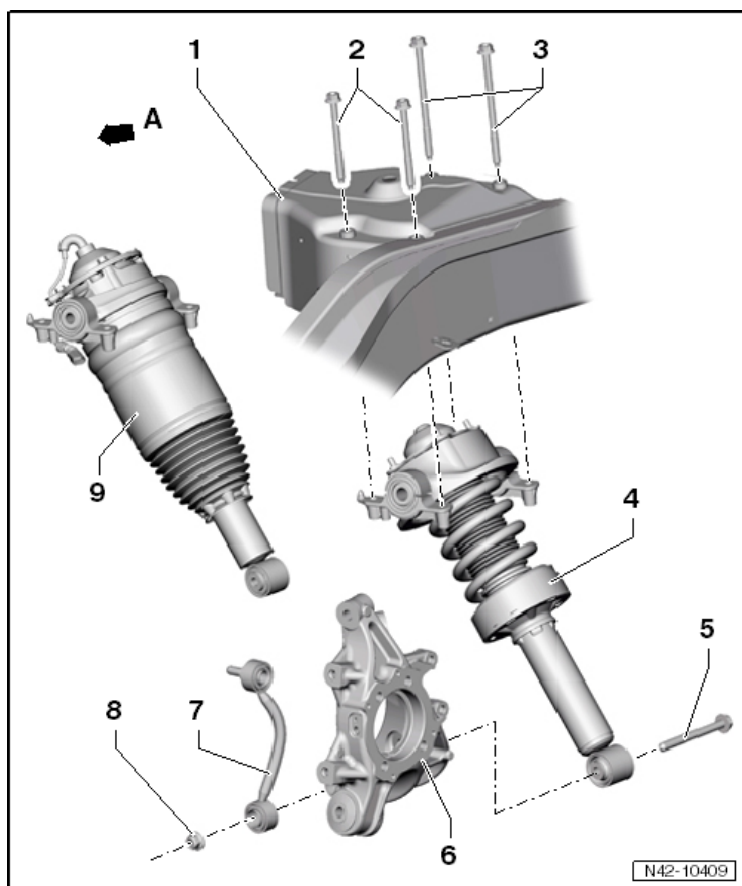


**11 - Cable Bracket**

**12 - Bolt**

10 Nm

## Rear Suspension Overview



**1 - Body**

**2 - Bolt**

- 50 Nm + 180° turn
- M10 x 1.5 x 115
- Always replace if removed

**3 - Bolt**

- 50 Nm + 180° turn
- M10 x 1.5 x 160
- Always replace if removed

**4 - Steel Spring Shock Absorber**

**5 - Bolt**

- Always replace if removed

**6 - Wheel Bearing Housing**

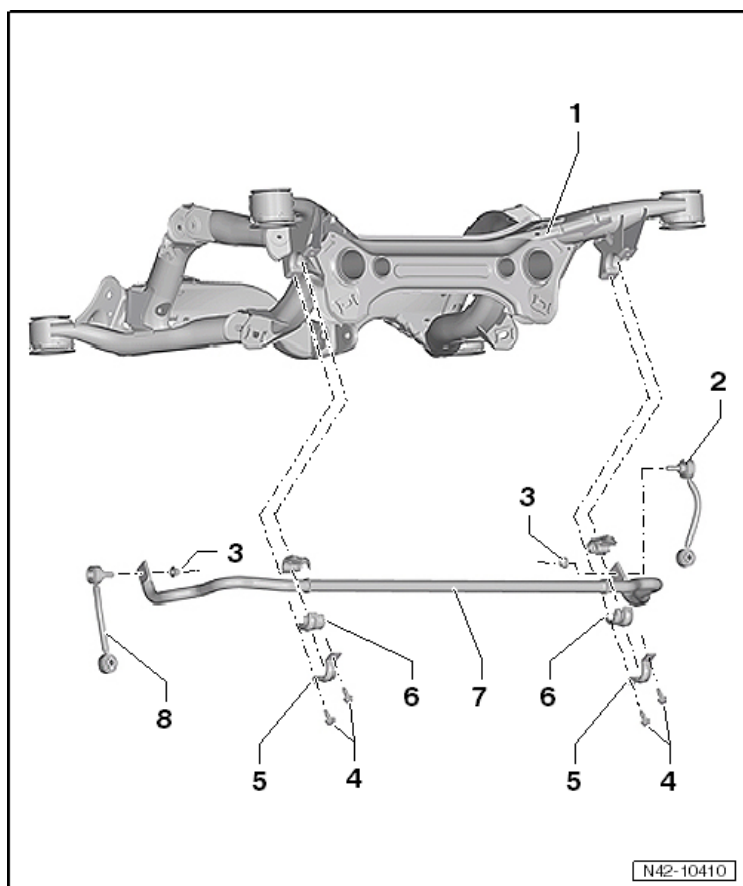
**7 - Coupling Rod**

## **8 - Nut**

- 90 Nm + 90° turn
- Always replace if removed

## **9 - Air Spring Shock Absorber**

## Stabilizer Bar Overview



**1 - Subframe**

**2 - Right Coupling Rod**

**3 - Nut**

500 Nm

Always replace if removed

**4 - Bolt**

50 Nm

Always replace if removed

**5 - Clamp**

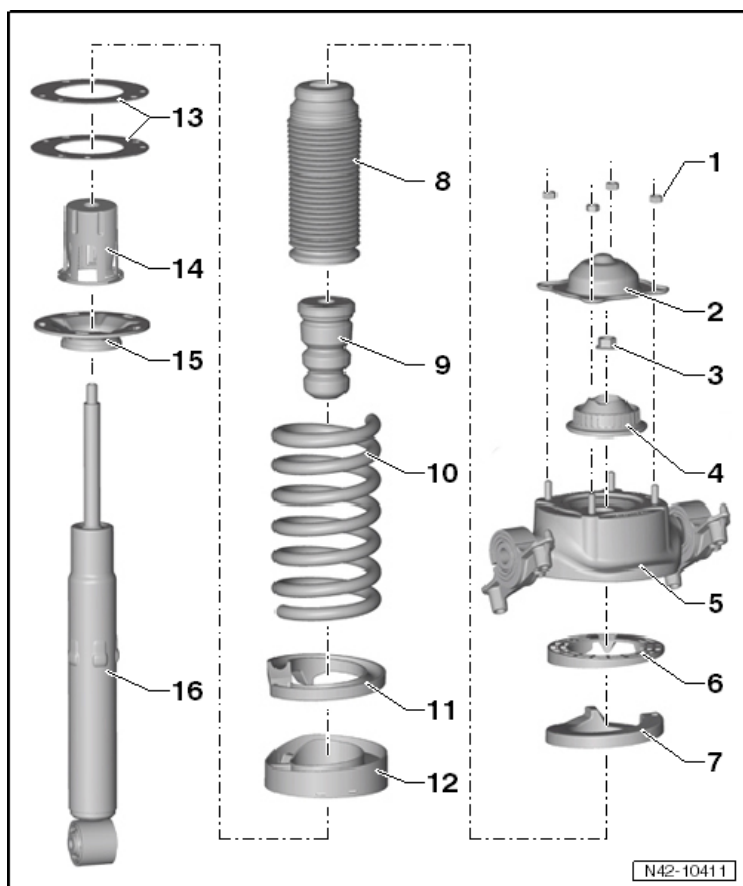
**6 - Rubber Mount**

**7 - Stabilizer Bar**

**8 - Left Coupling Rod**



## Steel Spring Shock Absorber Overview



### 1 - Nut

- 26 Nm
- Always replace if removed

### 2 - Support Bearing Cover

### 3 - Nut

- 56 Nm
- Always replace if removed

### 4 - Support Bearing

### 5 - Shock Absorber Mount

### 6 - Upper Spring Washer

### 7 - Upper Spring Support

### 8 - Boot

### 9 - Buffer Stop

### 10 - Coil Spring

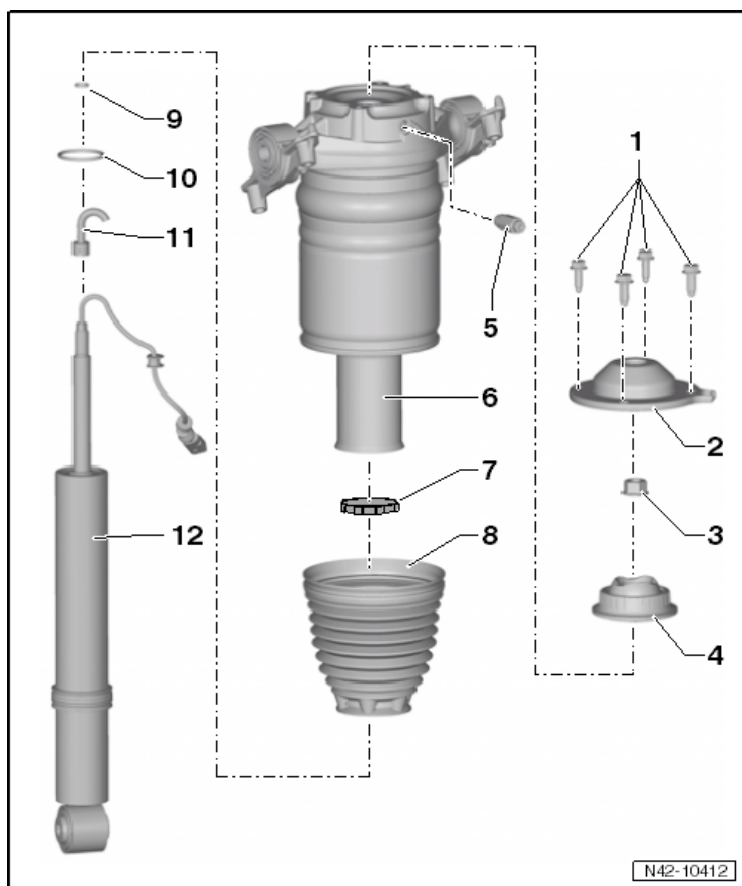
### 11 - Lower Spring Support

### 12 - Lower Spring Washer

### 13 - Spacing Disc

- 14 - Stop Cap**
- 15 - Spring Plate**
- 16 - Shock Absorbers**

## Rear Air Spring Damper Overview

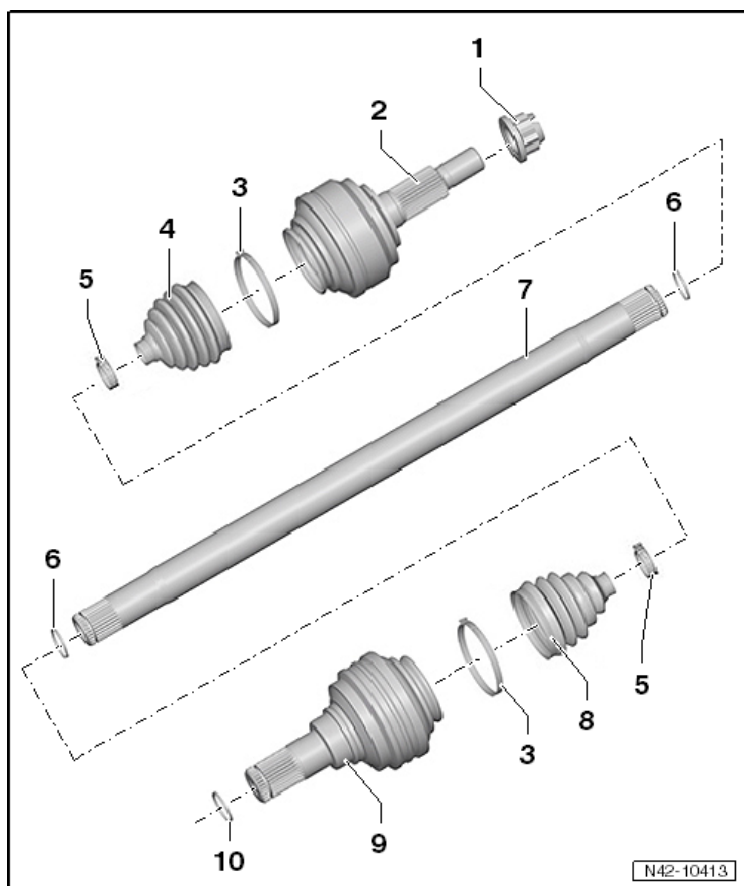


- 1 - Bolt**
  - 27 Nm
- 2 - Cover**
- 3 - Nut**
  - 70 Nm
  - Always replace if removed
- 4 - Rubber Mount**
- 5 - Pressure-Holding Valve**
  - 12 Nm
- 6 - Air Spring**
- 7 - Anti-Extraction Device**
- 8 - Boot**
- 9 - Seal**
  - Always replace if removed
- 10 - Seal**
  - Always replace if removed



**11 - Cable Guide**  
**12 - Shock Absorbers**

## Drive Axle Overview



**1 - Nut**

- 500 Nm
- Always replace if removed

**2 - Outer CV Joint**

**3 - Clamp**

- Always replace if removed

**4 - Protective Boot**

**5 - Clamp**

- Always replace if removed

**6 - Securing Ring**

- Always replace if removed

**7 - Bolt**

- 20 Nm

**8 - Drive Axle**

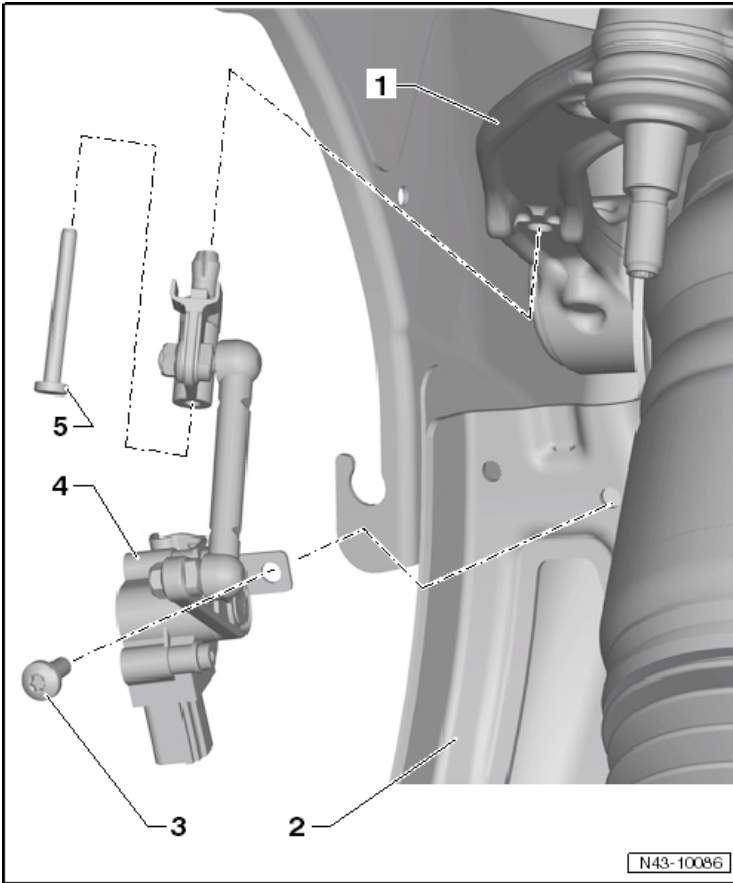
**9 - Inner CV Joint**

**10 - Securing Ring**

- Always replace if removed

# Self-Leveling Suspension

## Front Level Control System Sensor Overview



1 - Upper Control Arm

2 - Wheel Housing

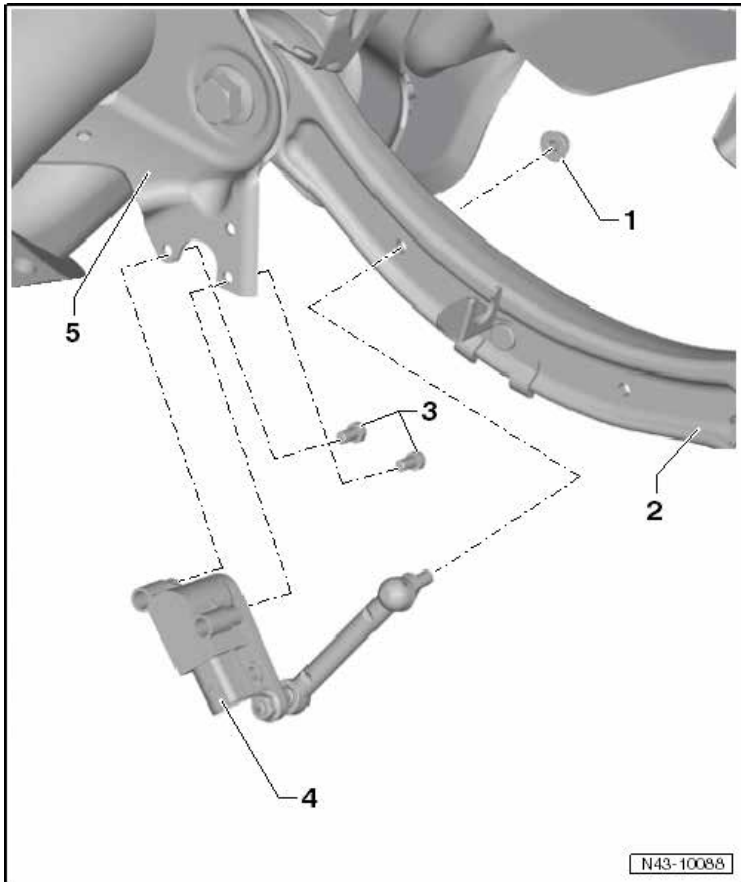
3 - Bolt

□ 20 Nm

4 - Left/Right Front Level Control System Sensor -G78/G289-

5 - Assembly Pin

## Rear Level Control System Sensor Overview



**1 - Nut**

□ 8 Nm

**2 - Upper Transverse Link**

**3 - Bolt**

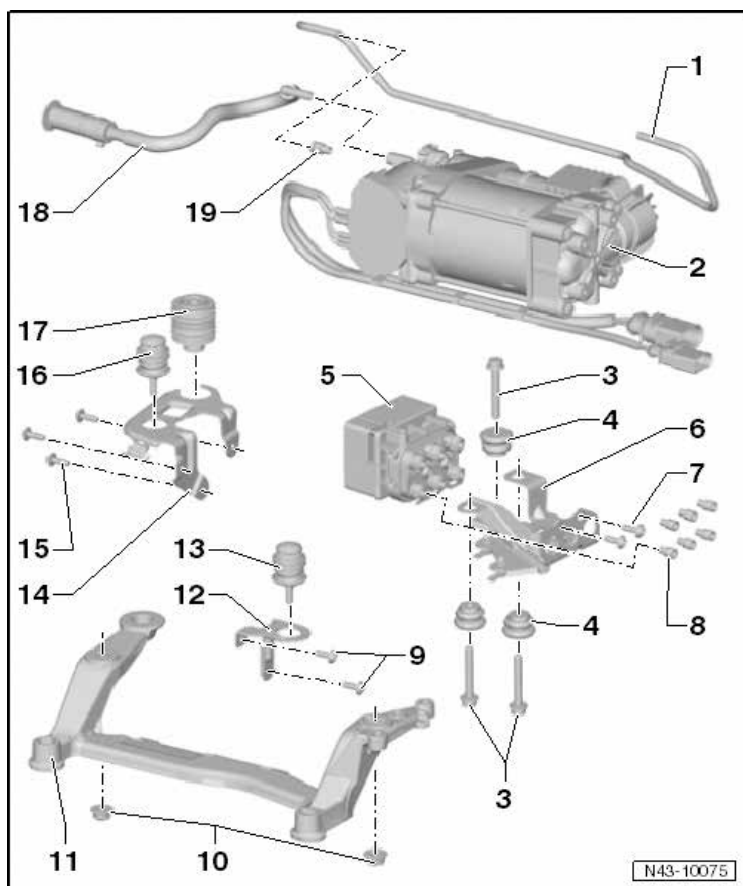
□ 20 Nm

**4 - Left/Right Rear Level Control System Sensor -G76/G77-**

**5 - Subframe**



## Compressor with Adaptive Suspension Valve Block Overview



**1 - Air Line**

□ 4 Nm

**2 - Compressor**

**3 - Bolt**

□ 5 Nm

**4 - Damper Element**

**5 - Adaptive Suspension Valve Block -NX7-**

**6 - Bracket**

**7 - Bolt**

□ 5 Nm

**8 - Air Line**

□ 4 Nm

**9 - Bolt**

□ 5 Nm

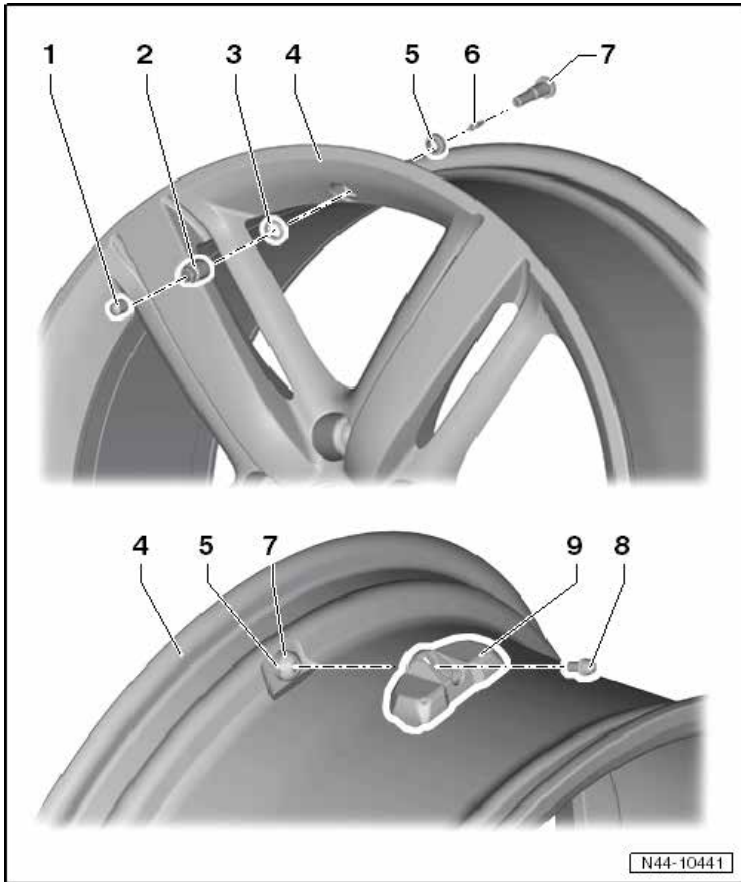
**10 - Nut**

□ 6 Nm

- 11 - Bracket**
- 12 - Outer CV Joint**
- 13 - Rubber Bushing**
- 14 - Bracket**
- 15 - Bolt**
  - 5 Nm
- 16 - Rubber Bushing**
- 17 - Rubber Bushing**
- 18 - Intake Pipe**
- 19 - Air Line**
  - 4 Nm

# Wheels, Tires

## Tire Pressure Sensor and Metal Valve Component Overview



- 1 - Valve Cap
- 2 - Nut
  - 4 Nm
- 3 - Washer
- 4 - Disk Wheel
- 5 - Seal
- 6 - Valve Core
- 7 - Metal Valve
- 8 - Bolt
  - 4 Nm
- 9 - Tire Pressure Sensor



## Fastener Tightening Specifications

Component	Nm
Metal valve-to-wheel nut	4
Rear tire pressure monitoring transmitter in wheel housing-to-body bolt	6
Tire pressure monitoring control module-to-body bolt	6
Tire pressure sensor-to-metal valve bolt	4
Wheel bolt	180

## Wheel Alignment Data

### Wheel Alignment Specified Values

Specifications valid for all engine versions

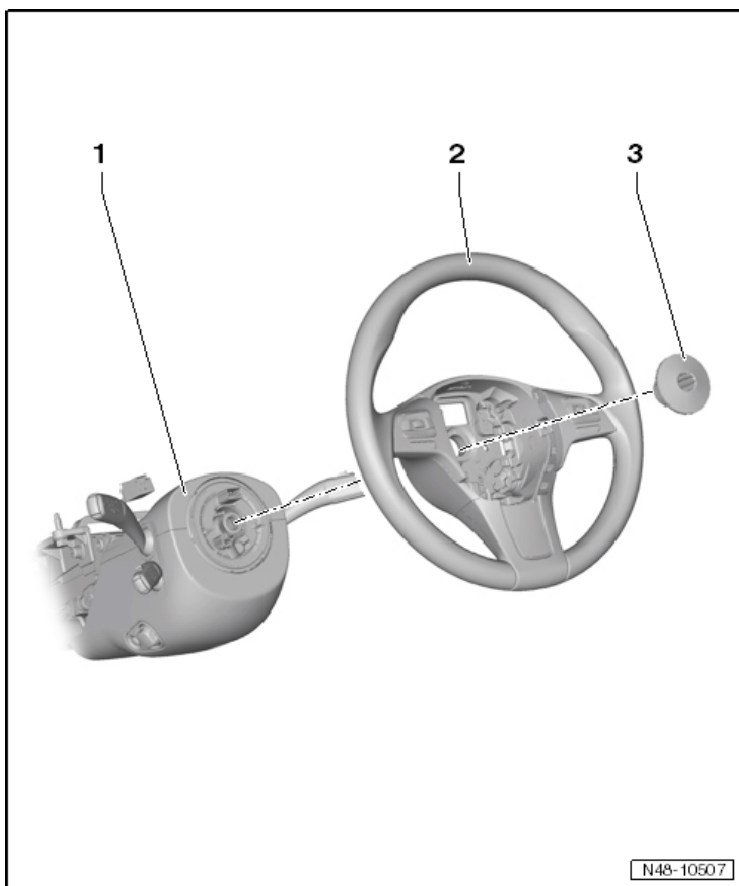
Front suspension	Steel spring shock absorber		Air spring shock absorber	
	1BA/1BE	1BB	1BK/1BY	2MA
Production Relevant No. (PR. No.)	1BA/1BE	1BB	1BK/1BY	2MA
Toe-in per wheel (each wheel)	+5' ± 2.5'	+5' ± 2.5'	+5' ± 2.5'	+5' ± 2.5'
Maximum permissible difference between both sides	5'	5'	5'	5'
Camber (wheels in straight ahead position)	-15' ± 20'	-15' ± 20'	-15' ± 20'	-15' ± 20'
Maximum permissible difference between both sides	20'	20'	20'	20'
Caster angle	+8° 35' +10'/-30'	+8° 26' +10'/-30'	+8° 38' +10'/-30'	+9° 5' +10'/- 30'
Maximum permissible difference between both sides	30'	30'	30'	30'
Standing height (in.)	478 ± 0.39	488 ± 0.39	475 ± 0.39	450 ± 0.39

Specifications valid for all engine versions

Rear suspension	Steel spring shock absorber		Air spring shock absorber	
	1BA/1BE	1BB	1BK/1BY	2MA
Production Relevant No. (PR. No.)	1BA/1BE	1BB	1BK/1BY	2MA
Toe-in per wheel (each wheel)	+10' ± 5'	+10' ± 5'	+10' ± 5'	+10' ± 5'
Maximum permissible difference between both sides	7'	7'	7'	7'
Camber	-1° 20' ± 20'	-1° 20' ± 20'	-1° 20' ± 20'	-1° 20' ± 20'
Maximum permissible difference between both sides	20'	20'	20'	20'
Standing height (in.)	486 ± 0.39	502 ± 0.39	483 ± 0.39	458 ± 0.39

# Steering

## Steering Wheel with Airbag Overview



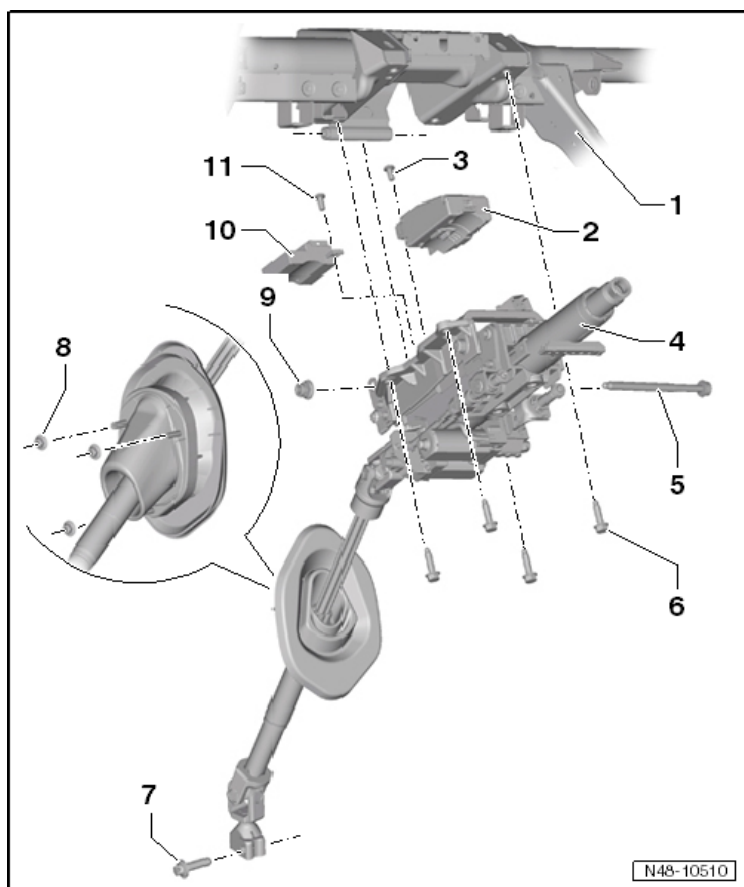
**1 - Steering Column**

**2 - Steering Wheel**

**3 - Bolt**

- 30 Nm + 90° turn
- Always replace if removed

## Steering Column Overview



**1 - Crossmember**

**2 - Electronic Steering Column Lock Control Module -J764-**

**3 - Bolt**

5 Nm

**4 - Steering Column**

**5 - Bolt**

**6 - Bolt**

20 Nm

**7 - Bolt**

20 Nm + 90° turn

Always replace if removed

**8 - Nut**

4 Nm

**9 - Nut**

20 Nm

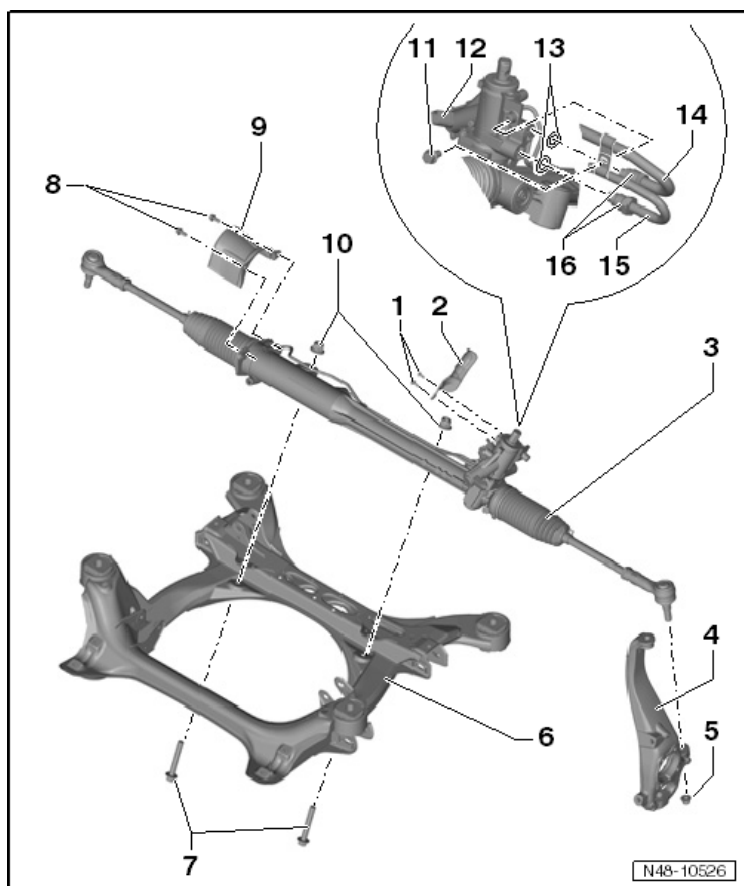
Always replace if removed

**10 - Power Adjustable Steering Column Control Module -J866-**

**11 - Bolt**

5 Nm

## Power Steering Overview



**1 - Bolt**

- 9 Nm

**2 - Heat Shield**

**3 - Power Steering Gear**

**4 - Wheel Bearing Housing**

**5 - Nut**

- 90 Nm
- Always replace if removed

**6 - Subframe**

**7 - Bolt**

- Always replace if removed

**8 - Bolt**

- 9 Nm

**9 - Heat Shield**

**10 - Nut**

- 90 Nm + 90° turn
- Always replace if removed

**11 - Bolt**

- 9 Nm

**12 - Servotronic Solenoid Valve -N119-**

**13 - Seal**

- Replace

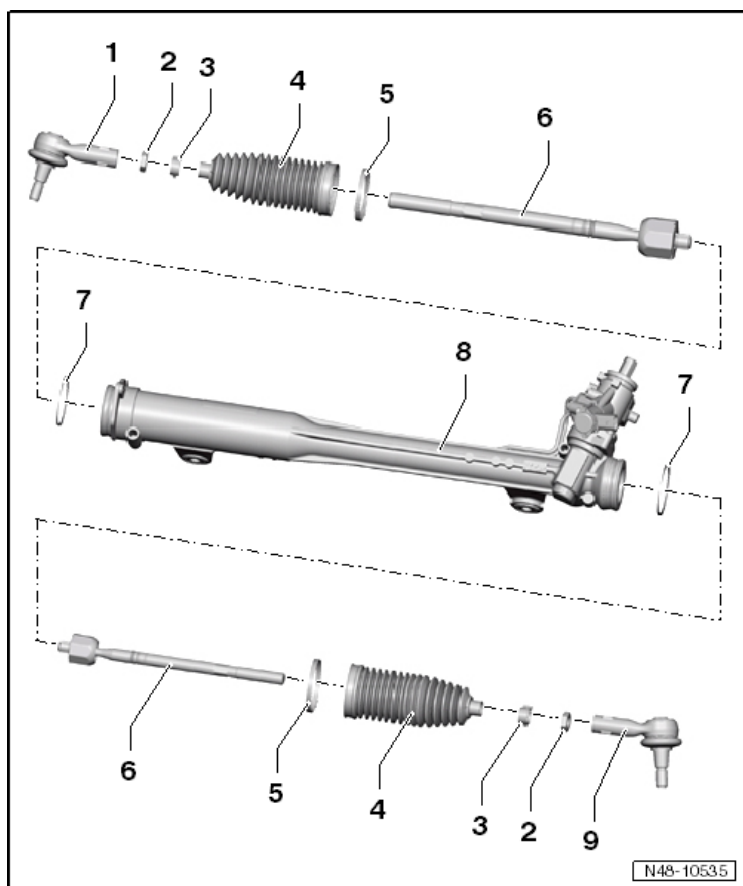
**14 - Pressurized Line**

**15 - Return Line**

**16 - Union Fitting**

- 32 Nm

## Power Steering Gear Overview



1 - Right Tie Rod End

2 - Nut

□ 70 Nm

3 - Spring Clamp

4 - Boot

5 - Clamp

6 - Tie Rod

□ 100 Nm

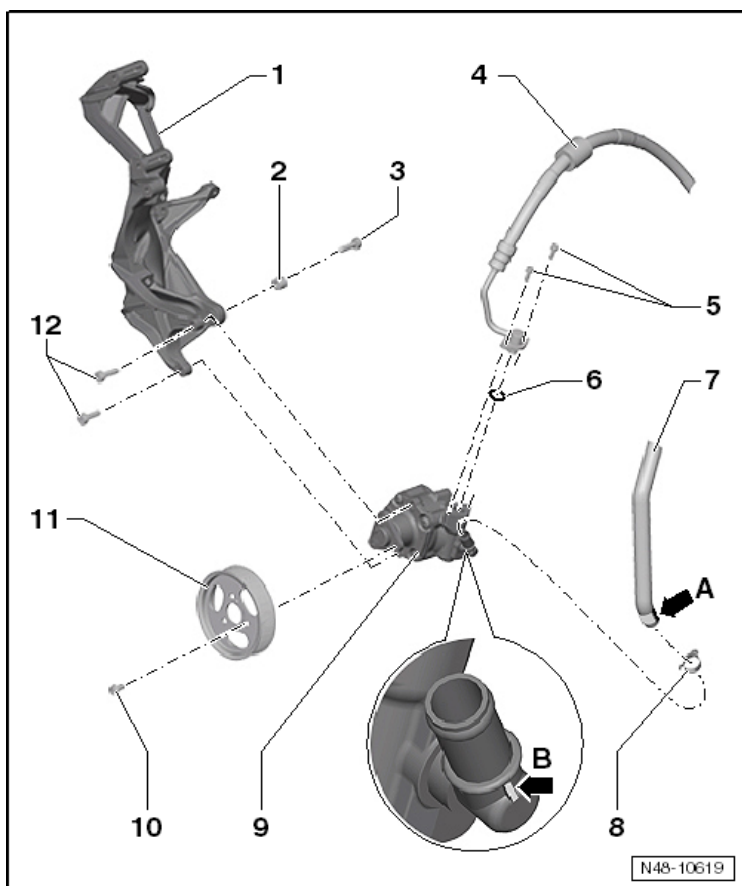
7 - Seal

8 - Power Steering Gear

9 - Left Tie Rod End

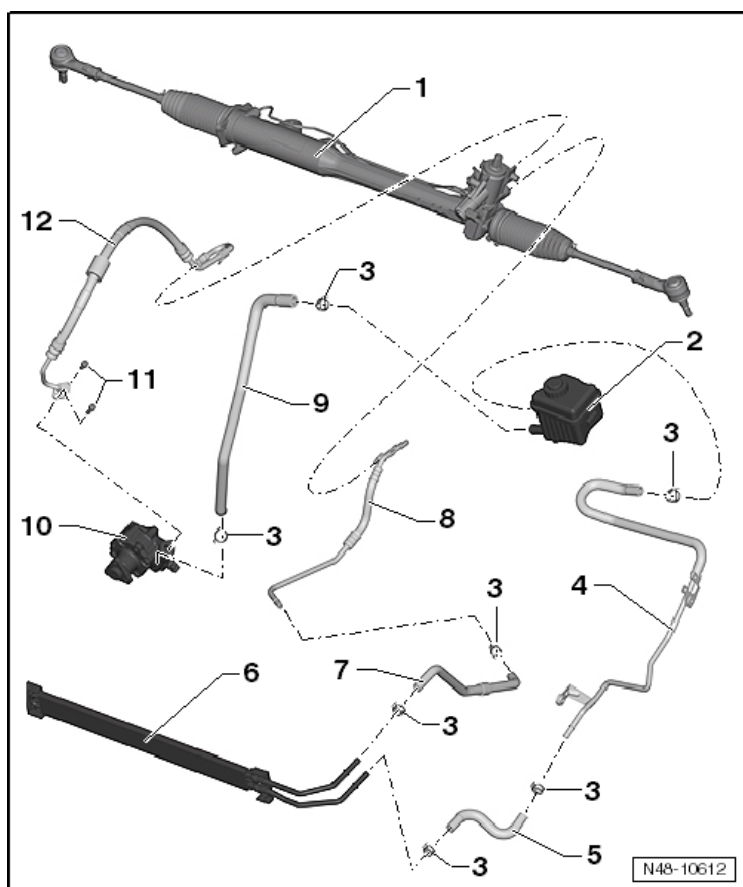


## Power Steering Pump Overview



- 1 - Bracket
- 2 - Bushing
- 3 - Bolt
  - 22 Nm
- 4 - Pressurized Line
- 5 - Bolt
  - 9 Nm
- 6 - Seal
  - Always replace if removed
- 7 - Intake Hose
- 8 - Spring Clamp
- 9 - Power Steering Pump
- 10 - Bolt
  - 22 Nm
- 11 - Belt Pulley
- 12 - Bolt
  - 22 Nm

## Hydraulic Lines Overview



- 1 - Power Steering Gear
- 2 - Reservoir
- 3 - Clamp
- 4 - Return Line
- 5 - Return Hose
- 6 - Oil Cooler
- 7 - Return Hose
- 8 - Return Line
- 9 - Intake Hose
- 10 - Power Steering Pump
- 11 - Bolt
- 22 Nm
- 12 - Pressurized Line

# BRAKE SYSTEM

## General Information

### Vehicle Data Label

FAHRZG.-IDENT-NR. VEHICLE-IDENT-NO	X000 45-7-4053 NU
TYP./TYPE	WVG ZZZ 7P zB D 000157
	7P5 2T3
Touareg	V8TDI 250 KW
	TDI A8A
MOTORKB./ENGINE ENG.CODE/TRANS CODE	CKD LSG
LACKNR./INNENAUSST. PAINT NO./INTERIOR	LX7W KJ
W.-AUSSERSTELLUNGS	
X9X B0A CV6 G1G HQ2 J0P D57 Q2J	
- 1AT 1GB 1MR 1NE 5RQ 5SL TE5	
3S1 QG1 8AY 8GH 8ZH	
1KJ 1LG 7MG	
9VE 4X4 4F2 N5E 5MN	
UJC 0YB 2MA	

N00-10725

The following brakes are installed in this example:

- 1 - Rear brakes - 1KJ
- 2 - Front brakes - 1LG

The vehicle data label can be found in the spare wheel well and the Maintenance booklet.

## Front Brakes

Engine version	PR number	Front wheel brake
3.0L - 176 kW TDI	1LE	Brembo (17")
3.6l - 206 kW FSI		
3.0L - 245 kW TSI, Hybrid	1LJ	Brembo (18")

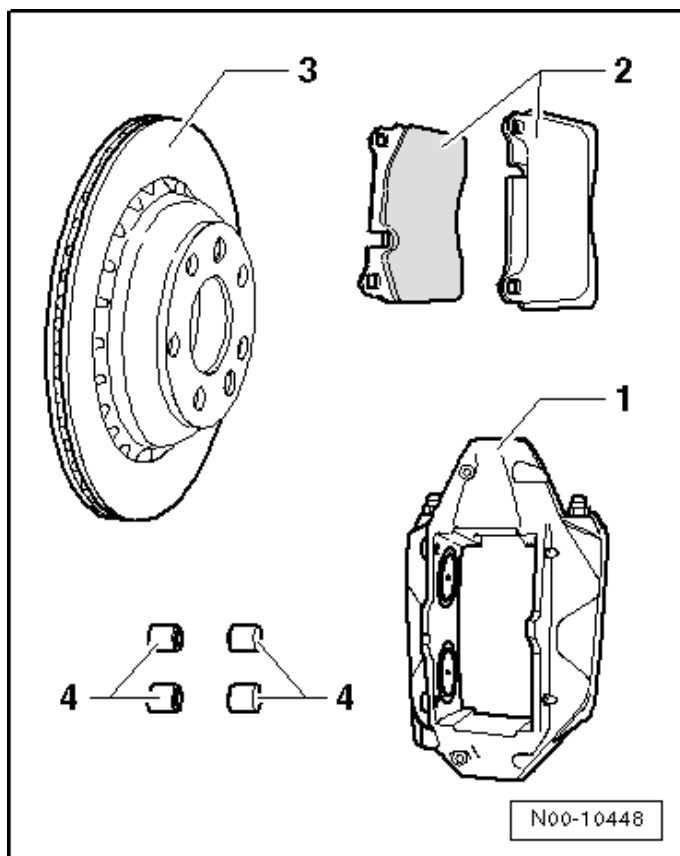
## Rear Brakes

Engine version	PR number	Front wheel brake
3.0L - 176 kW TDI	1KQ	Brembo (17")
3.0L - 245 kW TSI, Hybrid		

## Brake Master Cylinder and Brake Booster

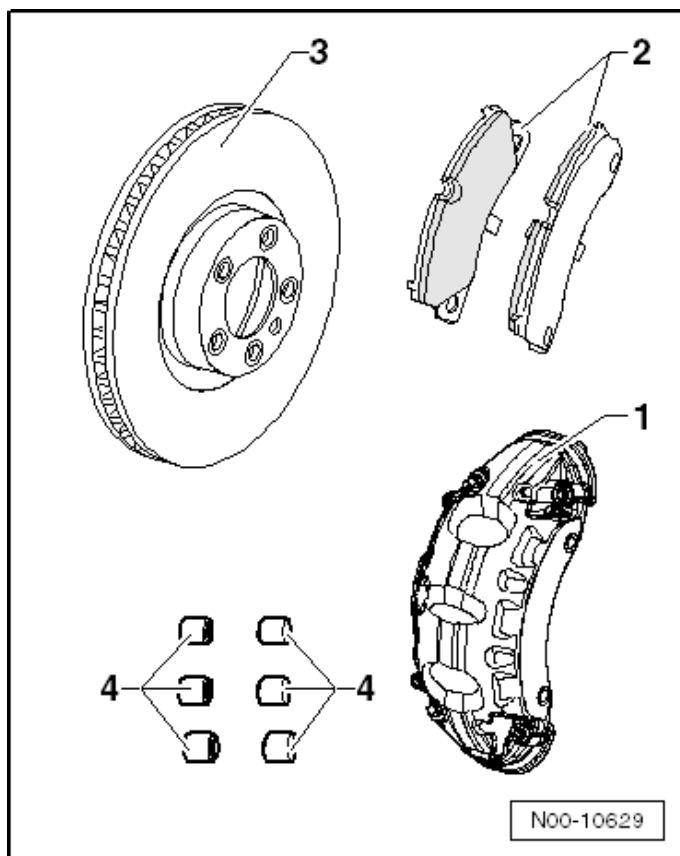
<b>Brake master cylinder</b>	Diameter in mm	26.99
<b>Brake booster</b>	Diameter in inches	9"/10"-Dual

## Front Brakes, Brembo 17 Inch



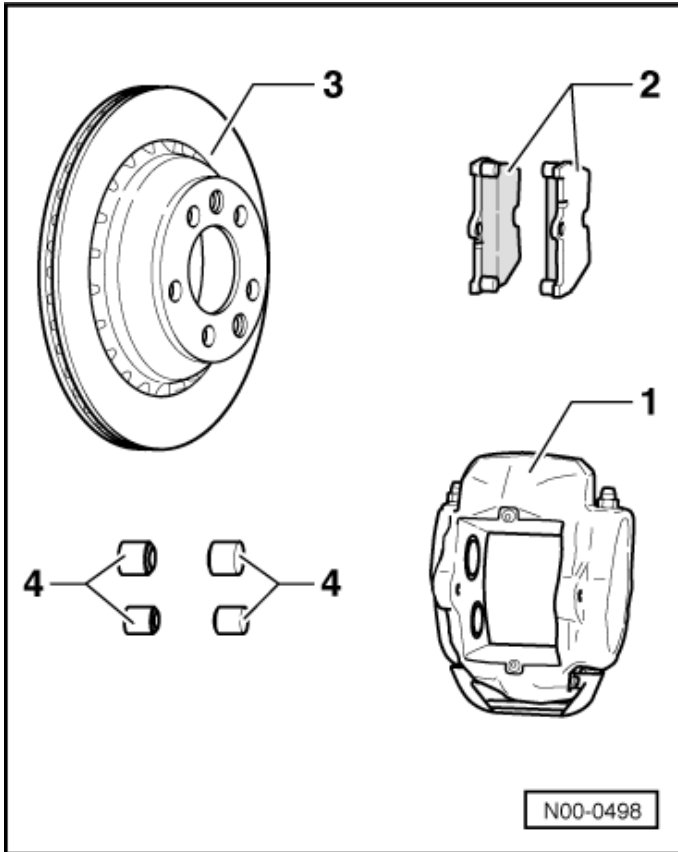
Item	PR Number	1LC / 1LE	
1	Brake caliper	Brembo (17")	
2	Brake pad thickness	mm	10.5
	Brake pad wear limit without back plate	mm	2
3	Brake disc	Diameter in mm	330
	Brake disc thickness	mm	32
	Brake disc wear limit	mm	30
4	Brake caliper piston	Diameter in mm	4 x 46

## Front Brakes, Brembo 18 Inch



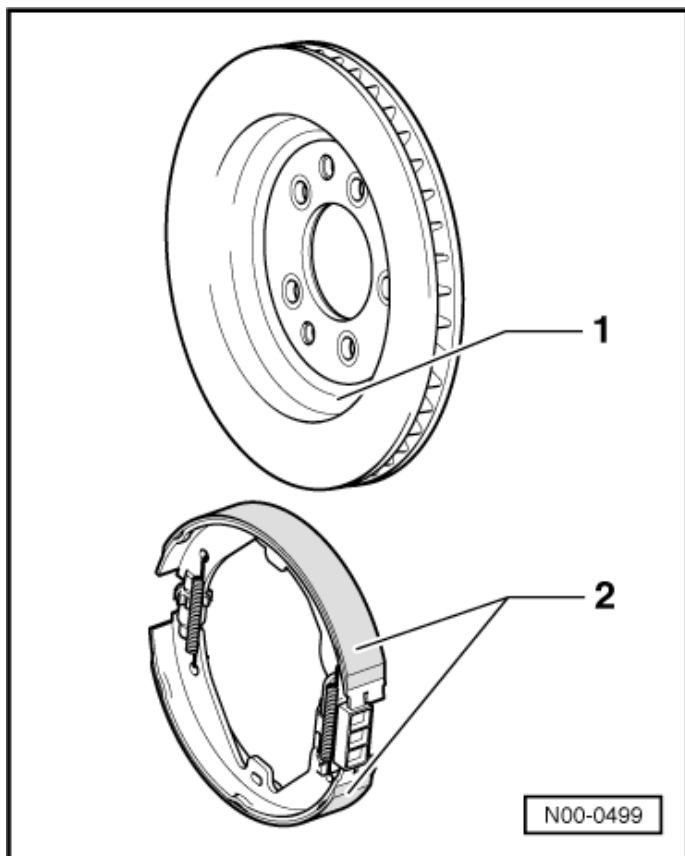
Item	PR Number	1LT / 1LU	
1	Brake caliper	Brembo (18")	
2	Brake pad thickness	mm	10
	Brake pad wear limit without back plate	mm	2
3	Brake disc	Diameter in mm	368
	Brake disc thickness	mm	36
	Brake disc wear limit	mm	34
4	Brake caliper piston	Diameter in mm	6 x 36

## Rear Disc Brakes



Item	PR Number	1KJ / 1KQ	
1	Brake caliper	Brembo (17")	
2	Brake pad thickness	mm	10
	Brake pad wear limit without back plate	mm	2
3	Brake disc	Diameter in mm	330
	Brake disc thickness	mm	28
	Brake disc wear limit	mm	26
4	Brake caliper piston	Diameter in mm	4 x 46

## Drum Parking Brake



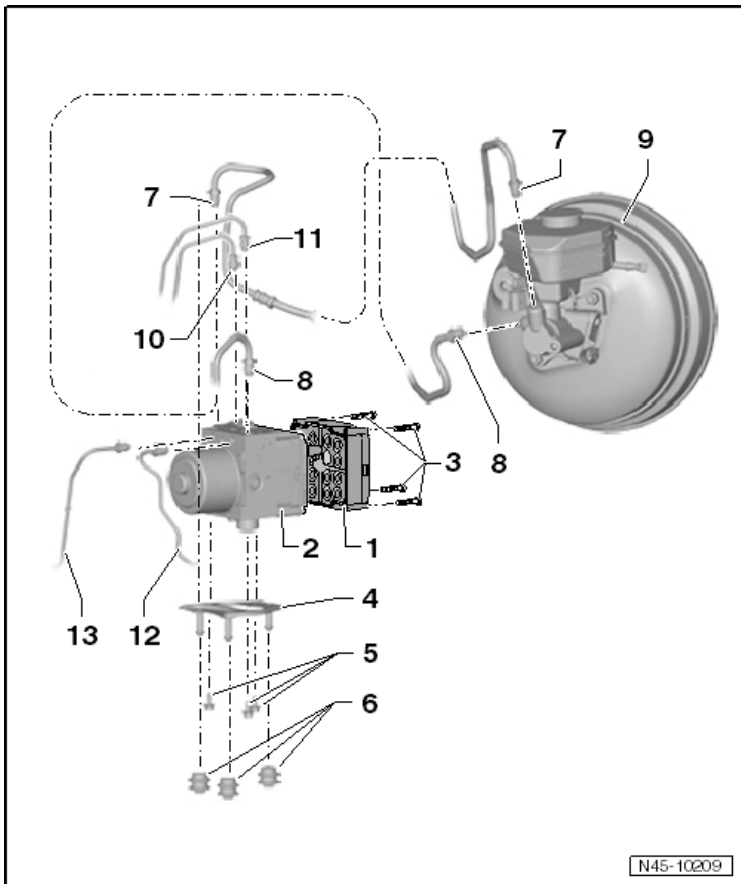
Item			
1	Brake drum	Diameter in mm	210
	Brake drum wear limit	Diameter in mm	211
2	Brake pad width	mm	30
	Brake pad total thickness	mm	5.5
	Brake pad wear limit without brake carrier	mm	1





# Anti-lock Brake System (ABS)

## Hydraulic Unit Overview, ABS MK 25



**1 - ABS Control Module -J104-**

**2 - ABS Hydraulic Unit -N55-**

**3 - Bolt**

2 + 0.8 Nm

Tighten diagonally, in steps, without tilting it.

**4 - Bracket**

**5 - Bolt**

9 Nm

**6 - Rubber Insulation**

**7 - Brake Line**

18 Nm

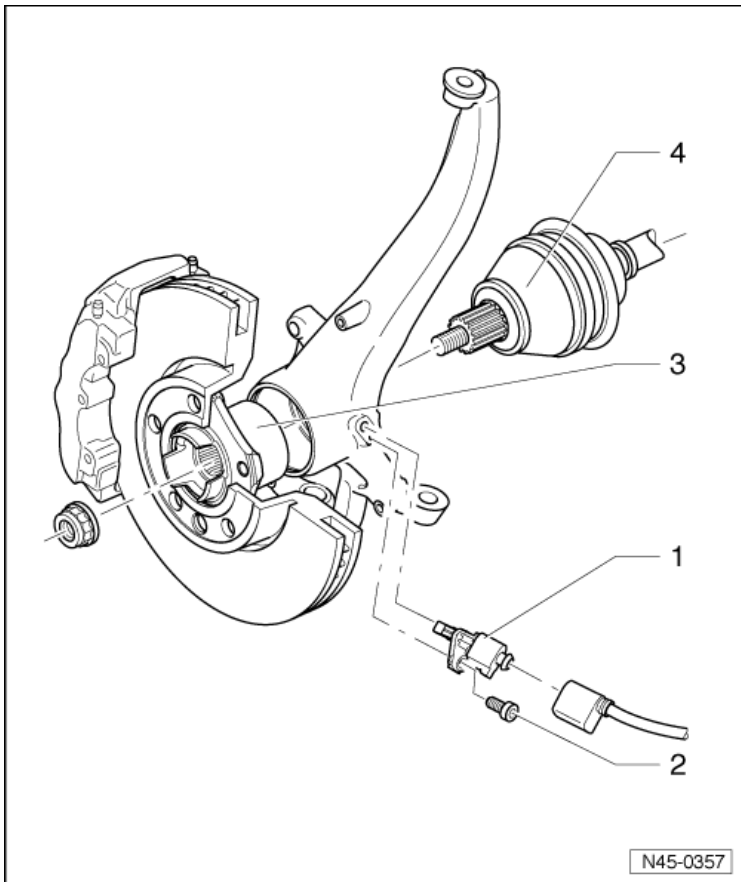
**8 - Brake Line**

18 Nm

**9 - Brake Booster with Master Brake Cylinder**

**10 - Brake Line** 14 Nm**11 - Brake Line** 14 Nm**12 - Brake Line** 14 Nm**13 - Brake Line** 14 Nm

## Front Wheel Speed Sensor Overview



**1 - ABS Speed Sensor**

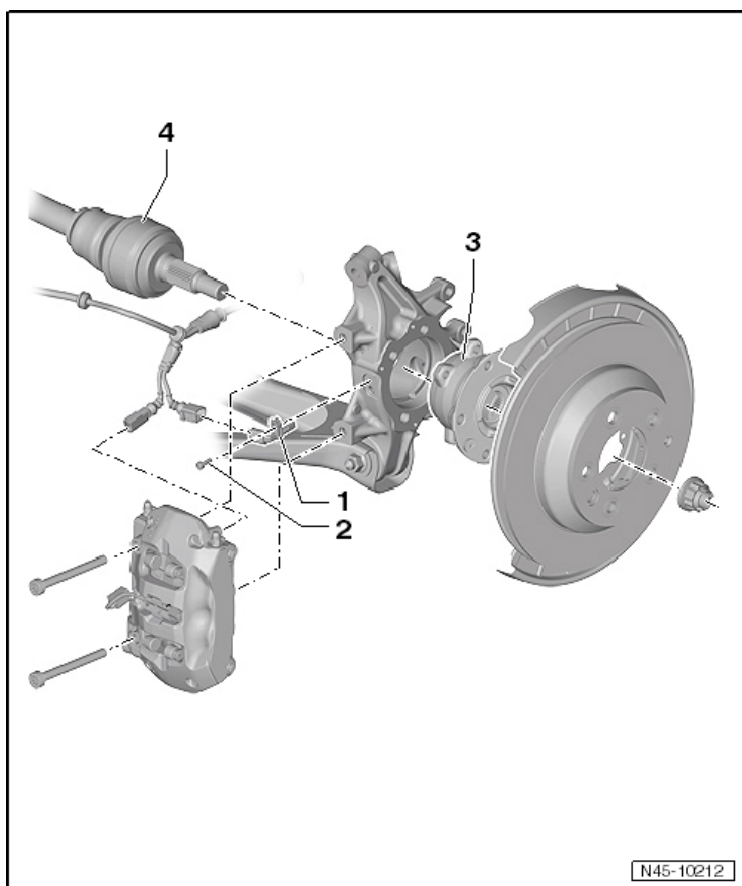
**2 - Bolt**

□ 8 Nm

**3 - Wheel Hub with Wheel Bearing**

**4 - Drive Axle**

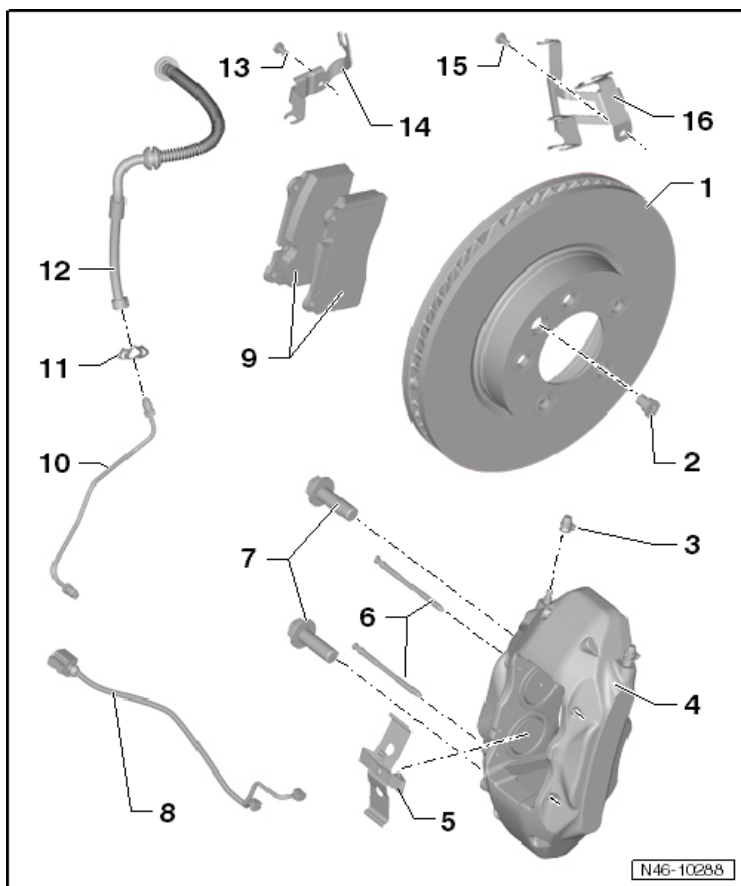
## Rear Wheel Speed Sensor Overview



- 1 - ABS Speed Sensor
- 2 - Bolt
  - 8 Nm
- 3 - Wheel Hub with Wheel Bearing
- 4 - Drive Axle

# Mechanical Components

## Front Brakes Overview, Brembo 17", 1LE



- 1 - Brake Disc
- 2 - Bolt
  - 15 Nm
- 3 - Wire for Brake Pad Wear Indicator
- 4 - Brake Caliper
- 5 - Retaining Spring
- 6 - Bolt
  - 30 Nm + 90° turn
  - Always replace if removed
- 7 - Dust Cap
- 8 - Brake Pads
- 9 - Brake Hose
  - 14 Nm
- 10 - Bolt
  - 9 Nm

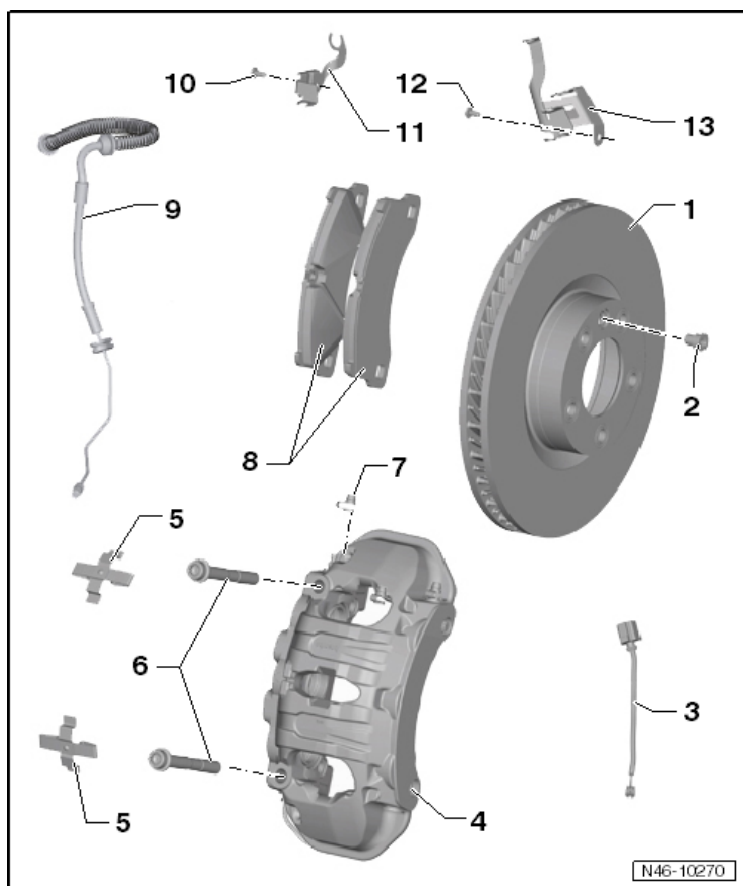
**11 - Upper Bracket**

**12 - Bolt**

20 Nm

**13 - Lower Bracket**

## Front Brakes Overview, Brembo 18", 1LJ



- 1 - Brake Disc
- 2 - Bolt
  - 15 Nm
- 3 - Wire for Brake Pad Wear Indicator
- 4 - Brake Caliper
- 5 - Retaining Spring
- 6 - Bolt
  - 30 Nm + 90° turn
  - Always replace if removed
- 7 - Dust Cap
- 8 - Brake Pads
- 9 - Brake Hose
  - 14 Nm
- 10 - Bolt
  - 9 Nm
- 11 - Upper Bracket

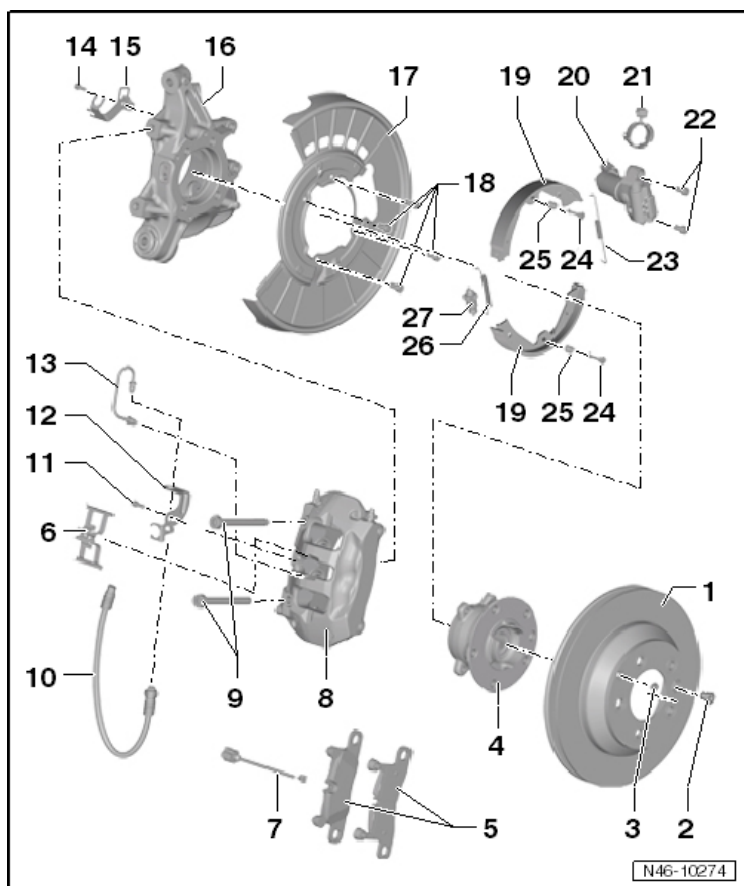


**12 - Bolt**

20 Nm

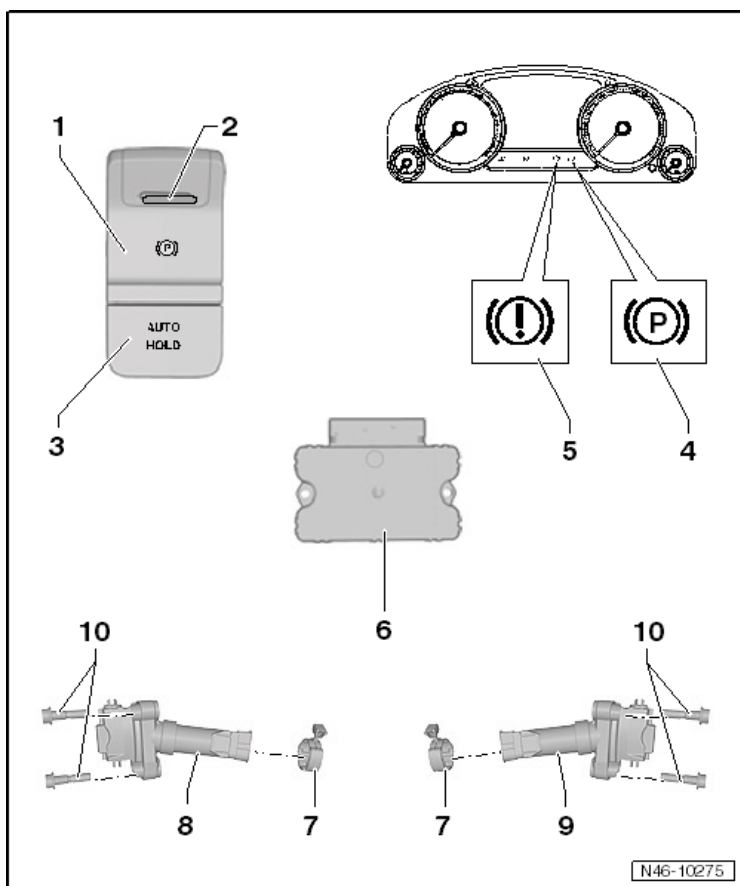
**13 - Lower Bracket**

## Rear Brakes Overview



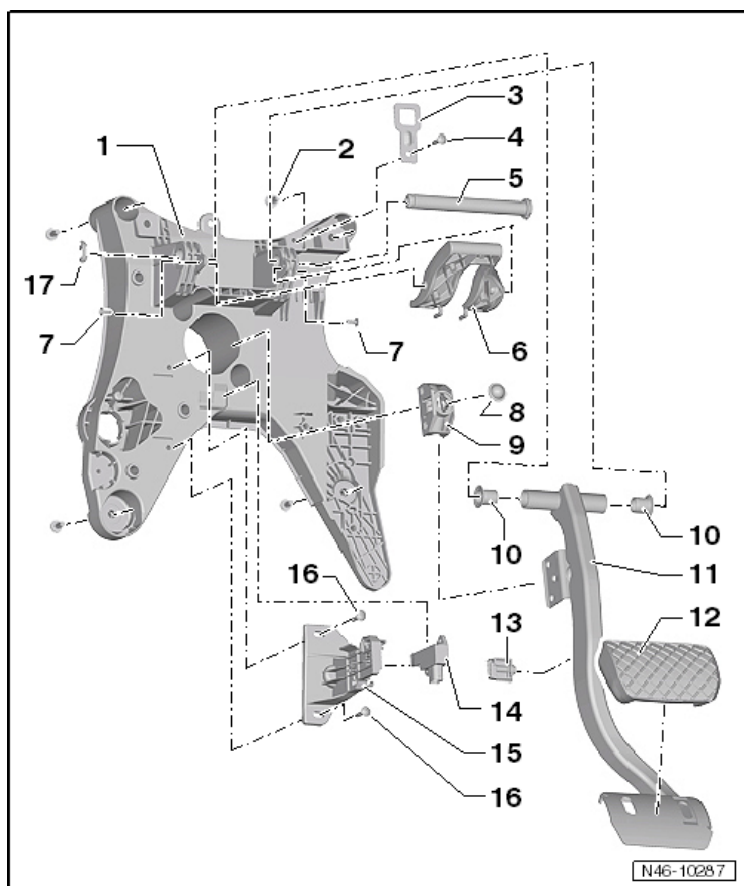
- 1 - Power Steering Gear
- 2 - Reservoir
- 3 - Clamp
- 4 - Return Line
- 5 - Return Hose
- 6 - Oil Cooler
- 7 - Return Hose
- 8 - Return Line
- 9 - Intake Hose
- 10 - Power Steering Pump
- 11 - Bolt
- 22 Nm
- 12 - Pressurized Line

## Hydraulic Lines Overview



- 1 - Electromechanical Parking Brake Button -E538-
  - 2 - Electromechanical Parking Brake Indicator Lamp -K213-
  - 3 - -AUTO HOLD- Button -E540-
  - 4 - Indicator Lamp with 2 Functions
  - 5 - Brake System Warning Lamp -K118-
  - 6 - Electromechanical Parking Brake Control Module -J540-
  - 7 - Clip
  - 8 - Left Parking Brake Motor -V282-
  - 9 - Right Parking Brake Motor -V283-
  - 10 - Bolt
- 65 Nm

## Hydraulic Lines Overview



**1 - Mounting Bracket for Pedal Assembly**

**2 - Bolt**

□ 20 Nm

**3 - Support**

**4 - Bolt**

□ 3 Nm

**5 - Pivot Pin**

**6 - Crash Wedge**

**7 - Bolt**

□ 3 Nm

**8 - Ball Socket**

**9 - Wheel Hub Support**

**10 - Bushing**

**11 - Brake Pedal**

**12 - Pedal Cap**

**13 - Bracket with Magnet**

**14 - Brake Pedal Position Sensor -G100-**

**15 - Bracket Brake Pedal Position Sensor -G100-**

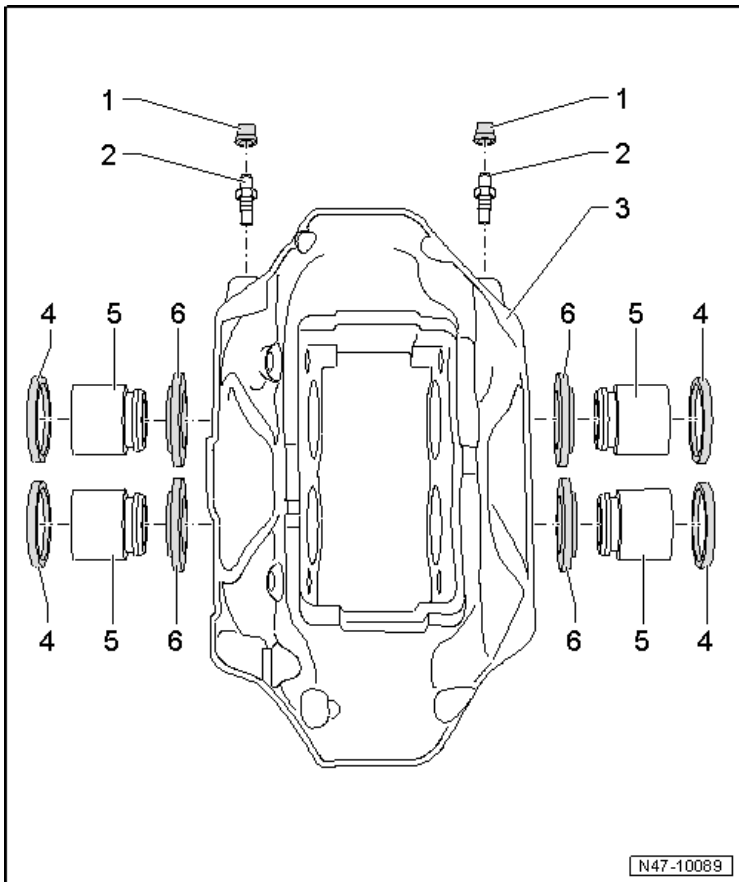
**16 - Bolt**

3 Nm

**17 - Securing Ring**

# Hydraulic Components

## Front Brake Caliper Overview, Brembo 17", 1LE



**1 - Dust Cap**

**2 - Bleeder Valve**

12 Nm

Apply a thin coat of assembly paste -G 052 150 A2- to the threads before screwing in.

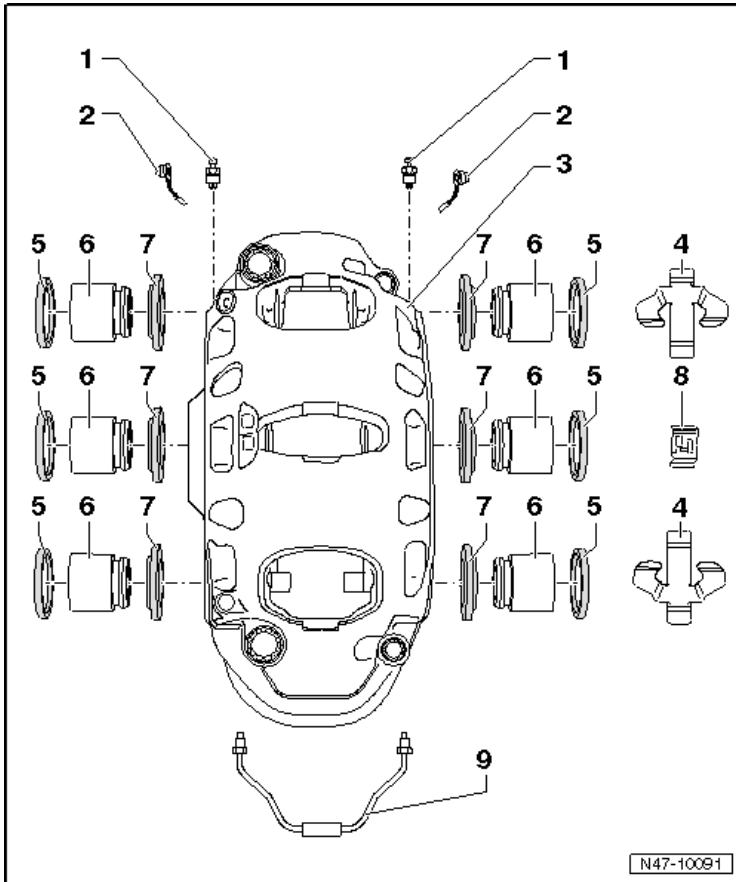
**3 - Brake Caliper**

**4 - Seal**

**5 - 46 mm Piston**

**6 - Protective Cap**

## Front Brake Caliper Overview, Brembo 18", 1LJ



### 1 - Bleeder Valve

- 12 Nm
- Apply a thin coat of assembly paste -G 052 150 A2- to the threads before screwing in.

### 2 - Bolt

- 20 Nm

### 3 - Brake Caliper

### 4 - Retaining Spring

### 5 - Piston Seal

### 6 - 36 mm Piston

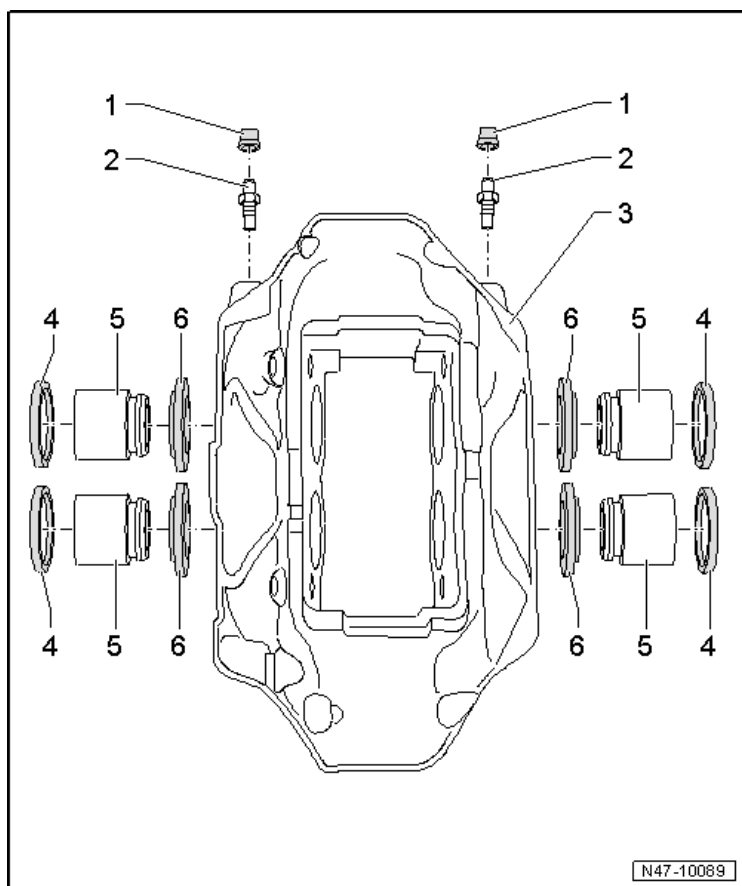
### 7 - Piston Caps

### 8 - Bracket

### 9 - Connecting Line

- 17 Nm

## Rear Brake Caliper Overview



**1 - Dust Cap**

**2 - Bleeder Valve**

12 Nm

Apply a thin coat of assembly paste -G 052 150 A2- to the threads before screwing in.

**3 - Brake Caliper**

**4 - Seal**

**5 - 46 mm Piston**

**6 - Protective Cap**





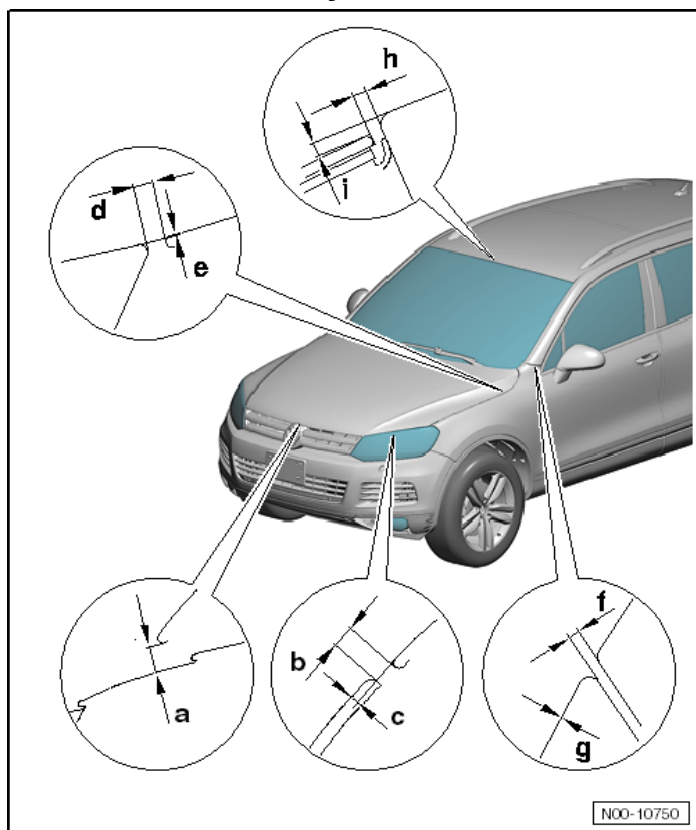


**12 - Brake Line** 18 Nm**13 - Sealing Plugs****14 - Sealing Plugs****15 - Brake Fluid Level Warning Switch -F34-****16 - Stud Bolt** 8 Nm**17 - Cap****18 - Brake Fluid Reservoir****19 - Pressure Sensor****20 - Vacuum Hose****21 - Sealing Plugs**

# BODY

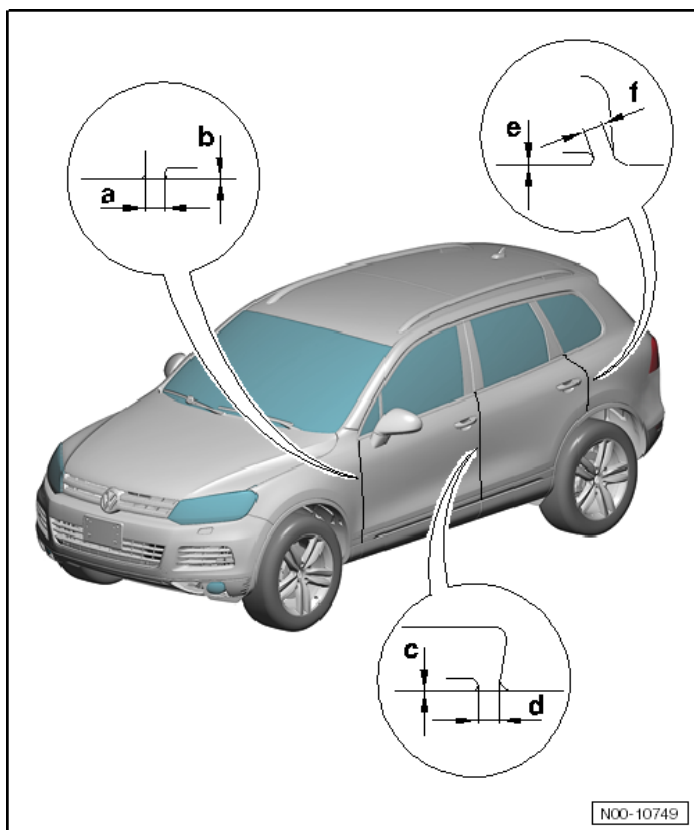
## Air Gap Body Dimensions

### Body, Front



Component	mm
a	$5.0 \pm 0.5$
b	$4.5 \pm 0.5$
c	$0.8 \pm 0.5$
d	$3.7 \pm 0.5$
e	$0.1 \pm 0.5$
f	$2.0 \pm 0.8$
g	$0.0 \pm 0.5$
h	$2.6 \pm 0.5$
i	$2.7 \pm 0.5$

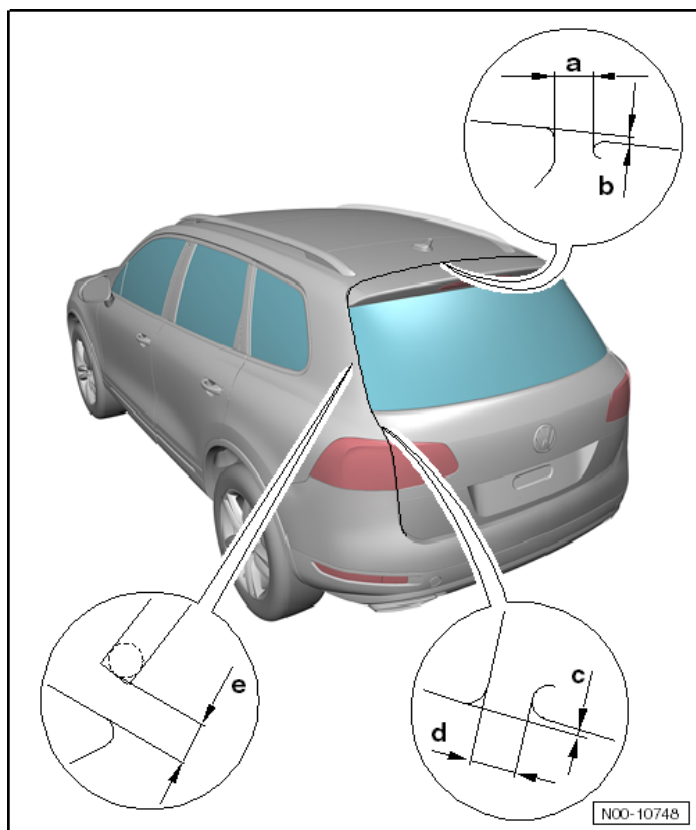
## Body, Center



Body

Component	mm
a	3.7 ± 0.5
b	0.0 ± 1.0
c	0.0 + 1.0
d	4.2 ± 0.5
e	0.0 + 1.0
f	3.7 ± 0.5

## Body, Rear



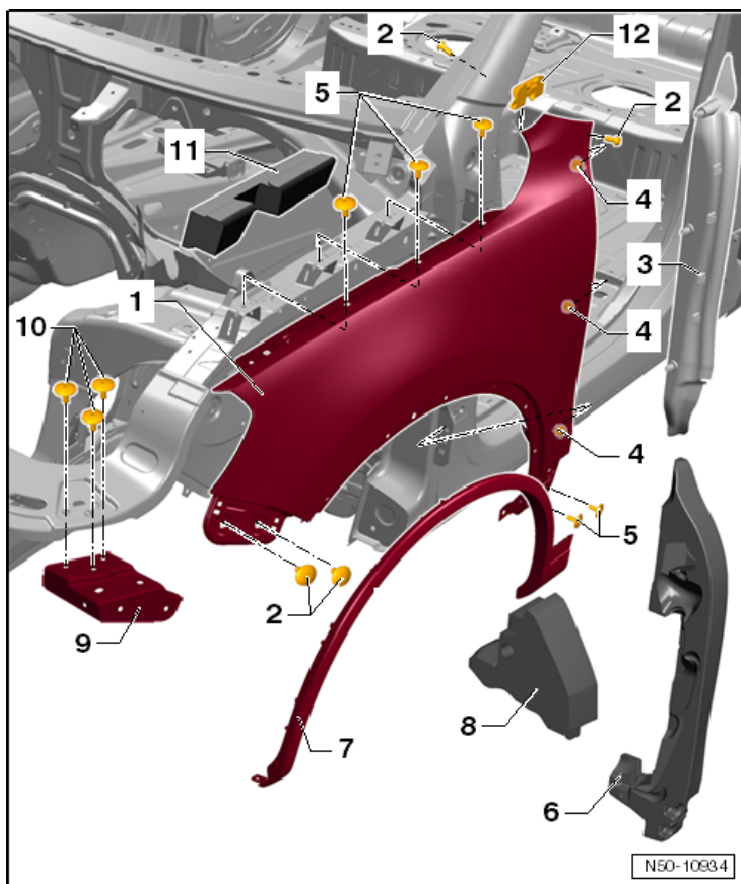
Component	mm
a	$5.0 \pm 0.5$
b	$1.1 \pm 0.5$
c	$0.6 \pm 0.5$
d	$3.5 \pm 0.5$
e	$4.2 \pm 0.3$



# Body Exterior

## Body Front

### Front Fender Assembly Overview



- 1 - Fender
- 2 - Bolt
  - 6 Nm
- 3 - Fender
- 4 - Hex Nut
  - 6 Nm
- 5 - Bolt
  - 6 Nm
- 6 - Seal
- 7 - Insulation
- 8 - Foam Piece

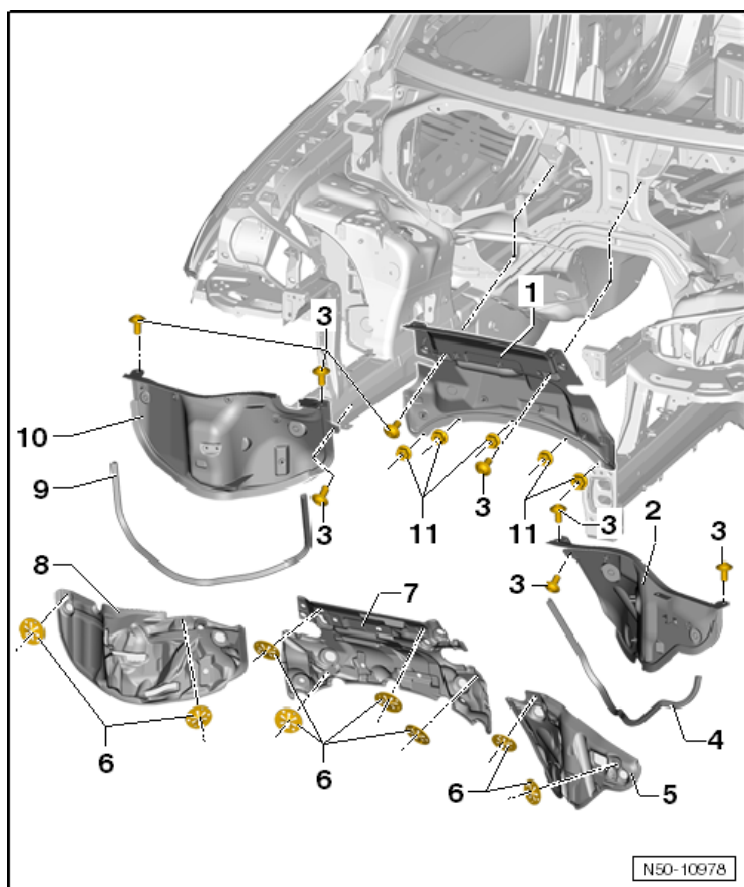


**9 - Bolt**

6 Nm

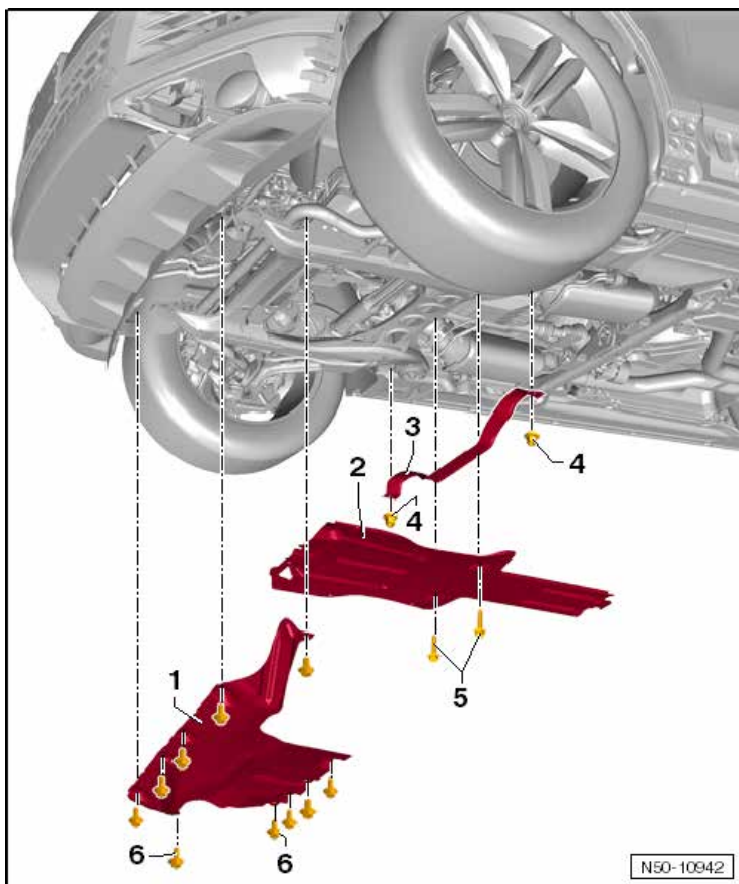
**10 - Foam Piece**

## Plenum Chamber Bulkhead Assembly Overview



- 1 - Center Plenum Chamber Bulkhead
- 2 - Left Plenum Chamber Bulkhead
- 3 - Bolt
  - 6 Nm
- 4 - Seal
- 5 - Insulation
- 6 - Lock Washer
- 7 - Insulation
- 8 - Insulation
- 9 - Seal
- 10 - Right Plenum Chamber Bulkhead
- 11 - Hex Nut
  - 6 Nm

## Noise Insulation Assembly Overview



Body

**1 - Front Noise Insulation**

**2 - Rear Noise Insulation**

**3 - Angle Bracket**

**4 - Hex Nut**

6 Nm

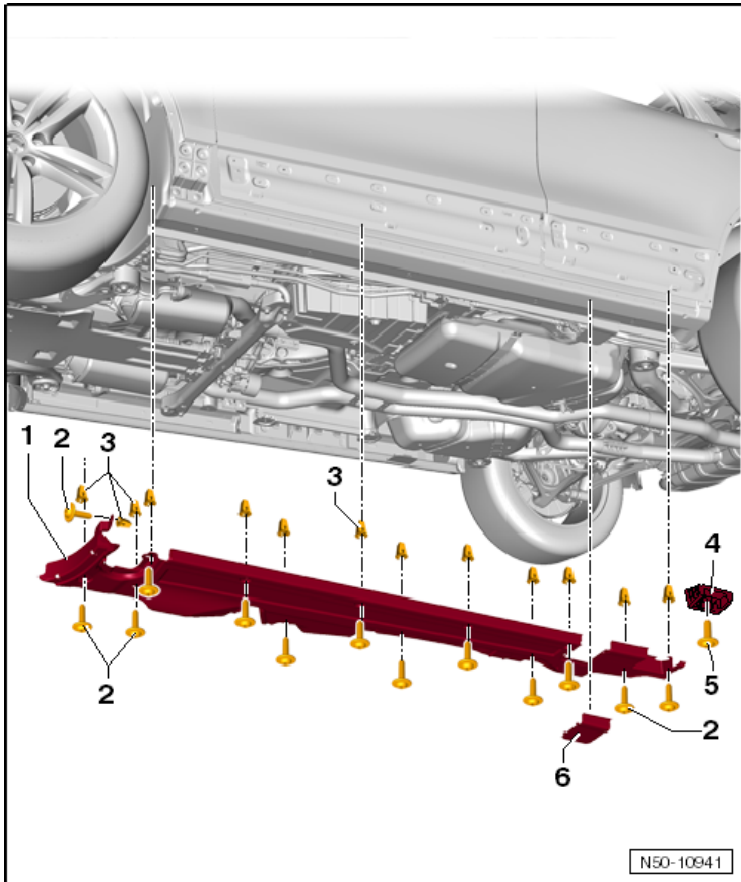
**5 - Bolt**

6 Nm

**6 - Bolt**

10 Nm

## Underbody Trim Assembly Overview



**1 - Underbody Cover**

**2 - Bolt**

2 Nm

**3 - Expanding Nut**

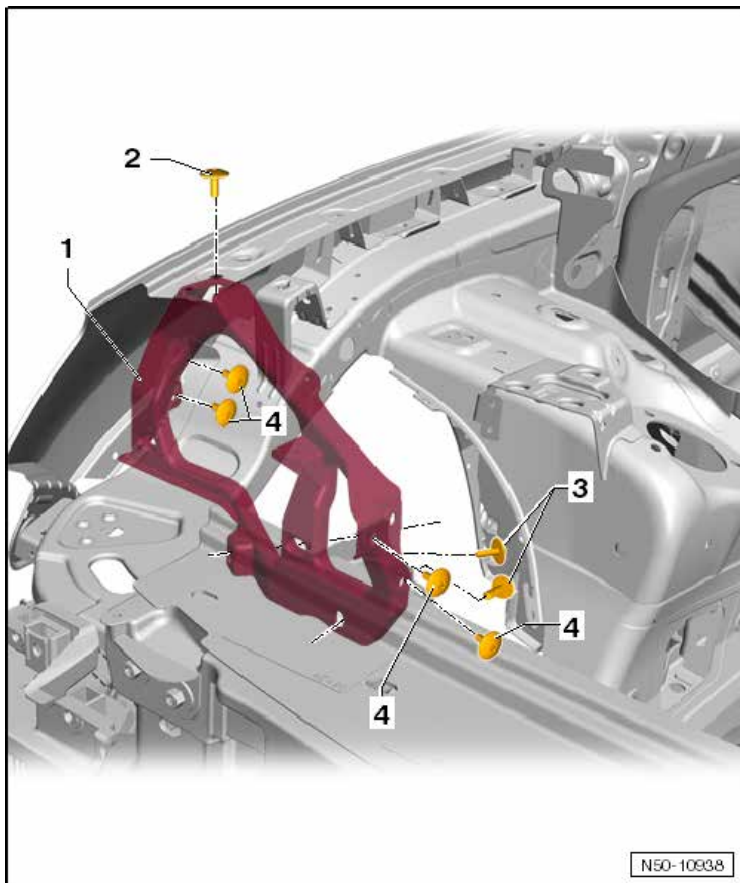
**4 - Hoist Mount**

**5 - Bolt**

2 Nm

**6 - Cover**

## Deformation Element Assembly Overview



Body

**1 - Deformation Element**

**2 - Bolt**

6 Nm

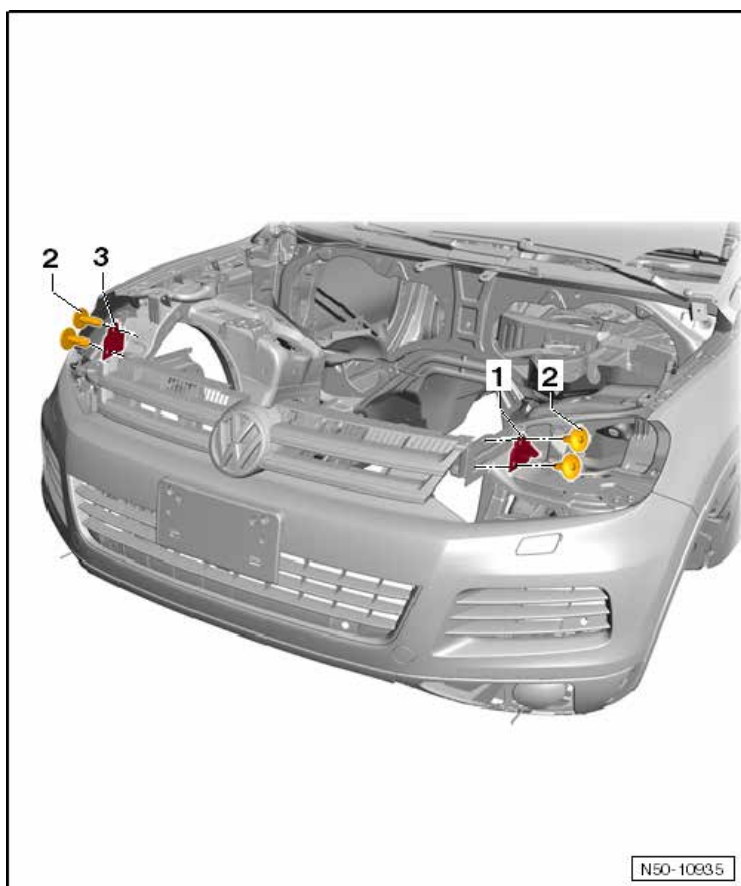
**3 - Bolt**

8 Nm

**4 - Bolt**

8 Nm

## Deformation Angle Bracket Assembly Overview

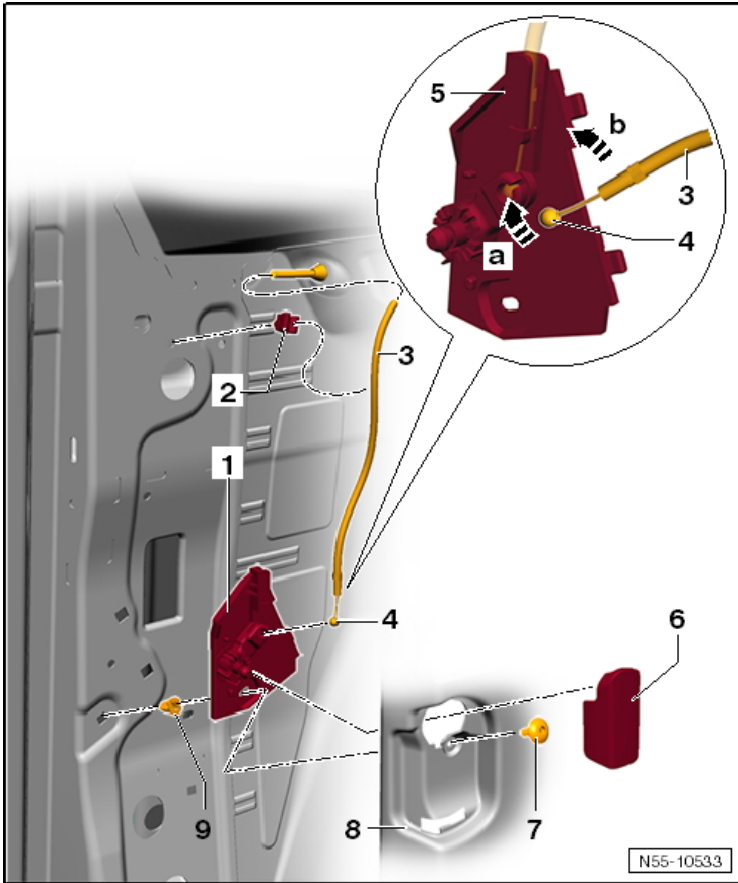


- 1 - Left Side Angle Bracket
- 2 - Right Side Angle Bracket
- 3 - Bolt

□ 2 Nm

# Hood, Lids

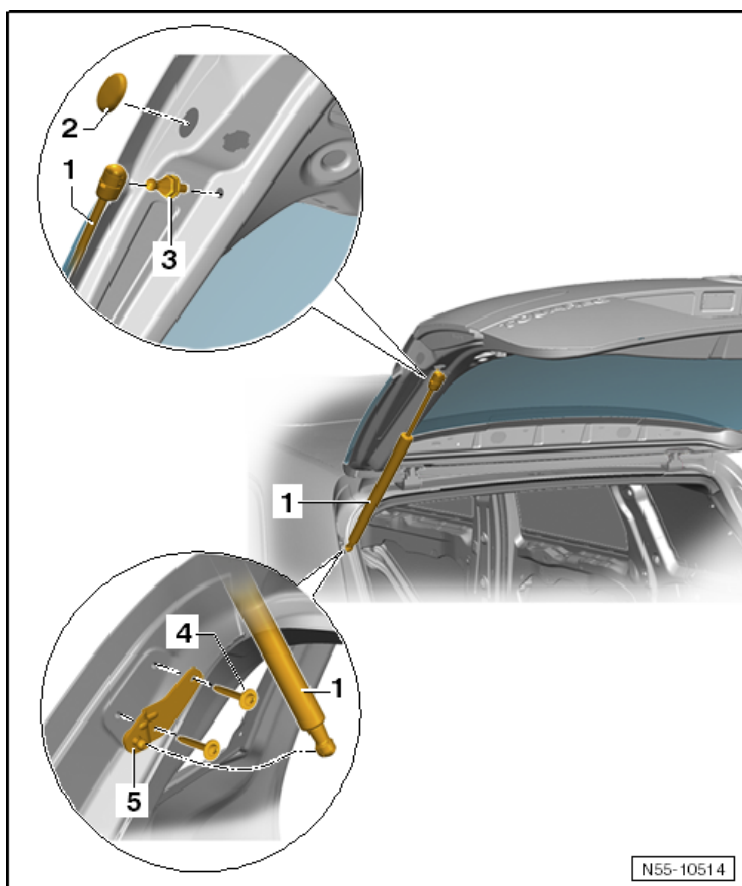
## Actuating Lever Assembly Overview



Body

- 1 - Mounting Bracket
- 2 - Retaining Clip
- 3 - Release Cable
- 4 - Release Cable Ball
- 5 - Retainer
- 6 - Actuating Lever
- 7 - Bolt
  - 2 Nm
- 8 - A-Pillar Lower Trim
- 9 - Insert Nut

## Gas-Filled Strut Assembly Overview



**1 - Gas Strut**

**2 - Cover**

**3 - Ball Head Pin**

□ 20 Nm + 45° turn

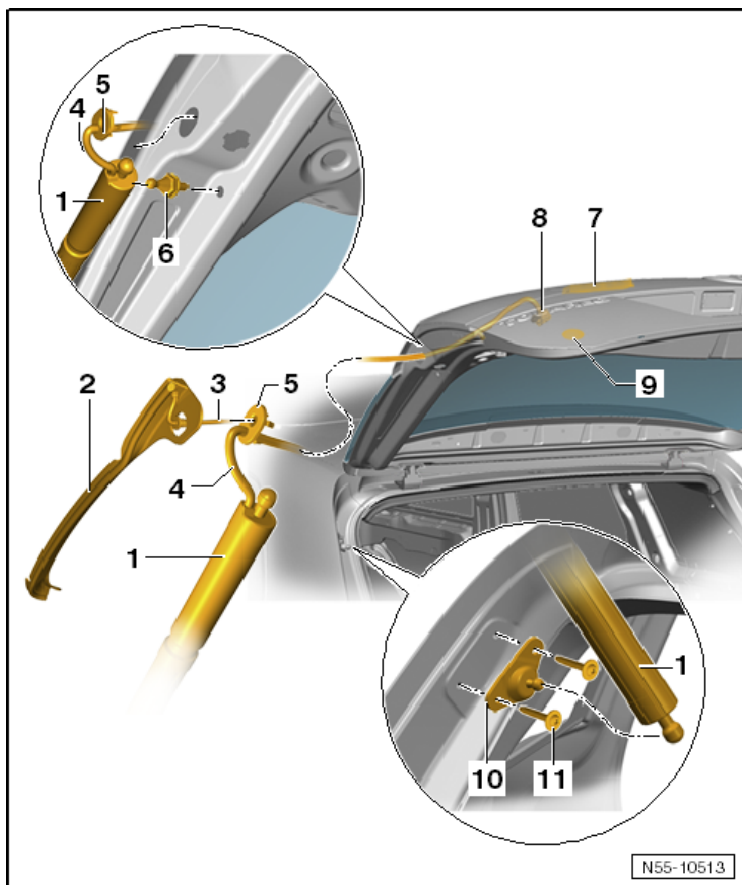
**4 - Bolt**

□ 10 Nm + 45° turn

**5 - Angle Bracket**



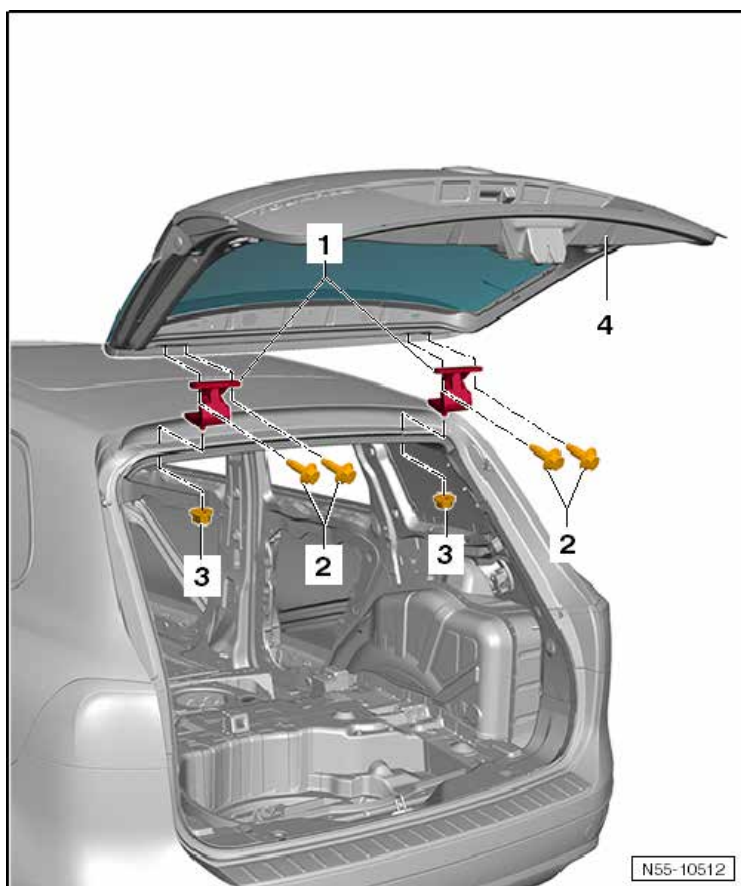
## Rear Lid Drive Motor Assembly Overview



Body

- 1 - Rear Lid Drive Motor
- 2 - Sensor Strip
- 3 - Wiring
- 4 - Wiring
- 5 - Rubber Grommet
- 6 - Ball Head Pin
  - 20 Nm + 45° turn
- 7 - Control Module
- 8 - Connector
- 9 - Warning Buzzer
- 10 - Angle Bracket
- 11 - Bolt
  - 8 Nm + 45° turn

## Rear Lid Hinge Assembly Overview



**1 - Hinge**

**2 - Bolt**

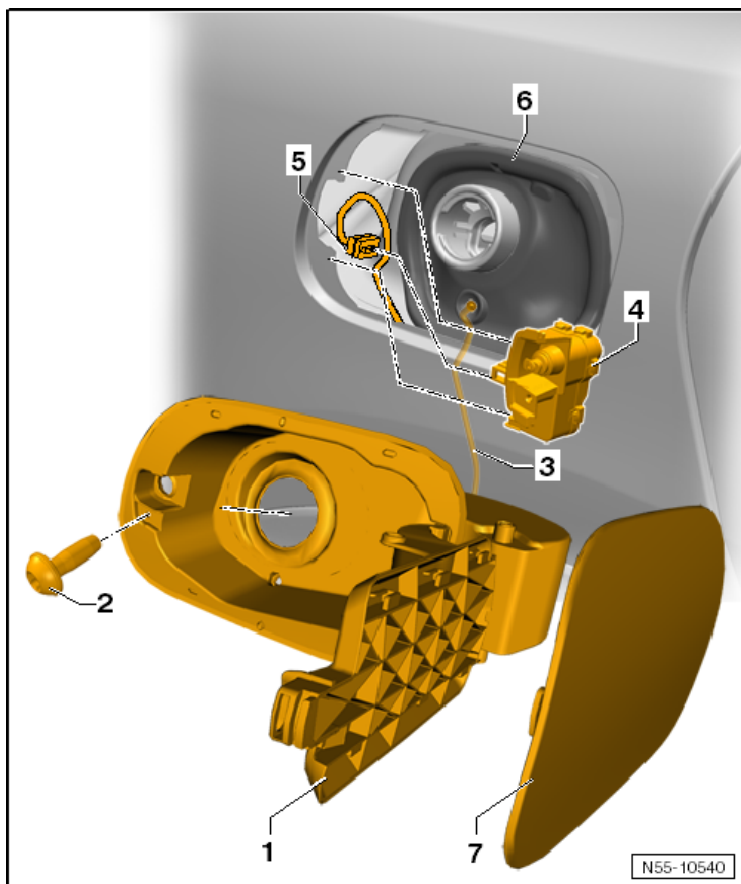
10 Nm

**3 - Hex Nut**

20 Nm + 90° turn

**4 - Rear Lid**

## Fuel Filler Door Unit and Actuator Assembly Overview

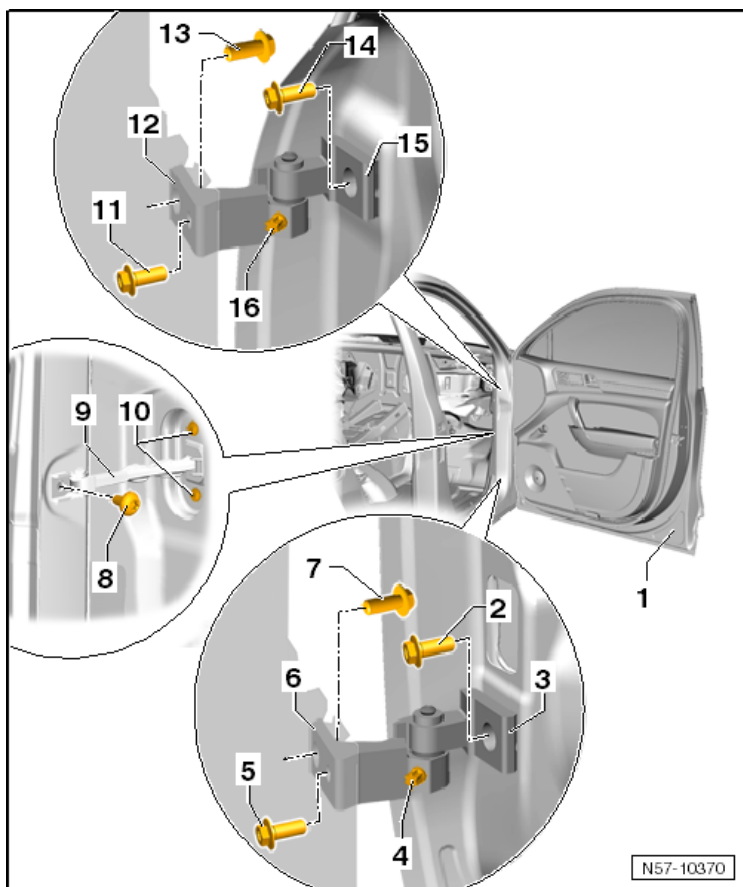


Body

- 1 - Fuel Filler Door Unit
- 2 - Bolt
  - 1.5 Nm
- 3 - Water Drain Hose
- 4 - Actuator
- 5 - Electrical Connection
- 6 - Rubber Grommet
- 7 - Fuel Filler DoorHood, Lids

# Front Doors, Central Locking System

## Door Hinge Assembly Overview



**1 - Door**

**2 - Socket Head Bolt**

50 Nm

Always replace bolts after removing them

**3 - Door Hinge**

**4 - Bolt**

23 Nm

**5 - Socket Head Bolt**

50 Nm

Always replace bolts after removing them

**6 - Door Hinge**

**7 - Socket Head Bolt**

50 Nm

Always replace bolts after removing them

**8 - Bolt**

- 30 Nm

**9 - Door Arrester****10 - Bolt**

- 9 Nm

**11 - Socket Head Bolt**

- 50 Nm
- Always replace bolts after removing them

**12 - Door Hinge****13 - Socket Head Bolt**

- 50 Nm
- Always replace bolts after removing them

**14 - Socket Head Bolt**

- 50 Nm
- Always replace bolts after removing them

**15 - Door Hinge****16 - Bolt**

- 23 Nm



**16 - Outer Door Seal**

**17 - Bolt**

9 Nm

**18 - Door Strap**

**19 - Bolt**

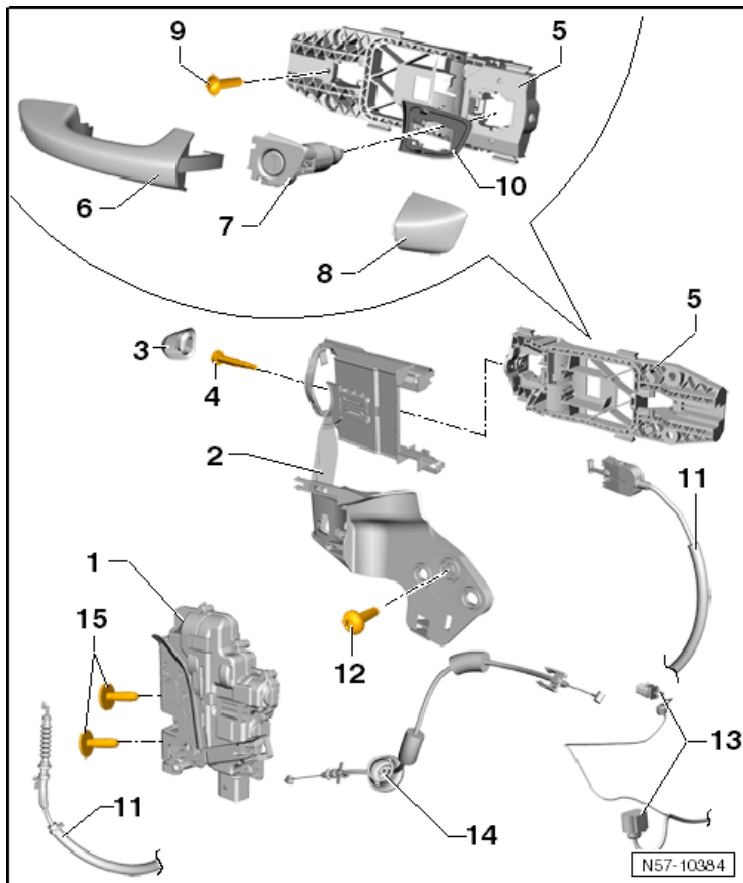
8 Nm

**20 - Subframe**

**21 - Bolt**

8 Nm

## Door Handle and Door Lock Assembly Overview



- 1 - Door Lock
- 2 - Assembly Piece
- 3 - Cover
- 4 - Bolt
  - 3.5 Nm
- 5 - Mounting Bracket
- 6 - Door Handle
- 7 - Lock Cylinder
- 8 - Cover
- 9 - Bolt
  - 1.5 Nm
- 10 - Backing
- 11 - Cable
- 12 - Bolt
  - 2 Nm
- 13 - Connector



**14 - Cable**

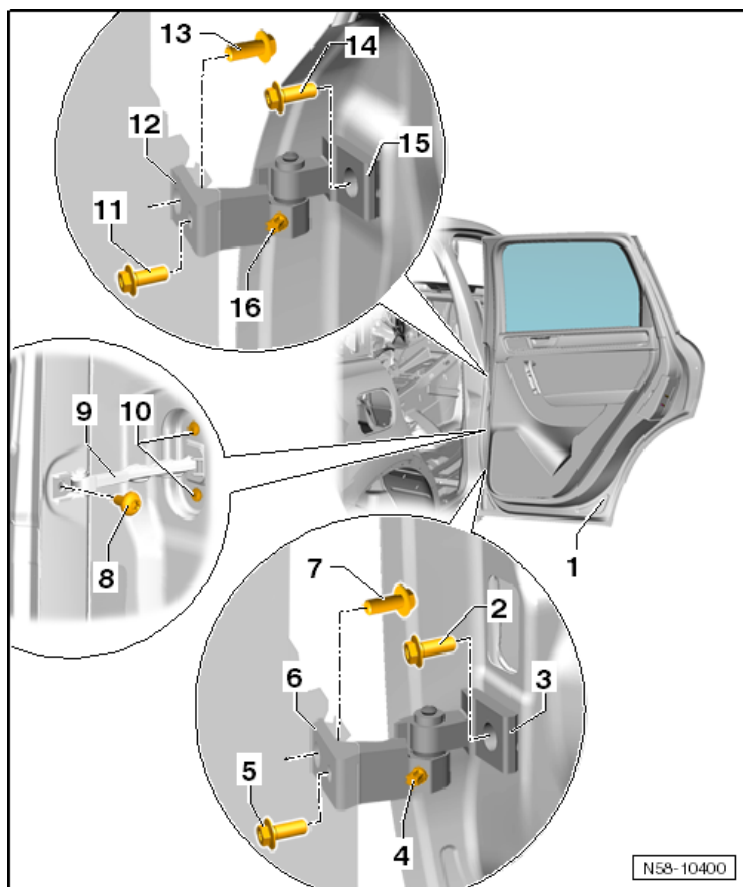
**15 - Bolt**

20 Nm

**Body**

## Rear Doors

### Door Hinge Assembly Overview



- 1 - Door
- 2 - Socket Head Bolt
  - 50 Nm
- 3 - Door Hinge
- 4 - Bolt
  - 23 Nm
- 5 - Socket Head Bolt
  - 50 Nm
- 6 - Door Hinge
- 7 - Socket Head Bolt
  - 50 Nm
- 8 - Bolt
  - 30 Nm
- 9 - Door Arrester

**10 - Bolt**

9 Nm

**11 - Socket Head Bolt**

50 Nm

**12 - Door Hinge**

**13 - Socket Head Bolt**

50 Nm

**14 - Socket Head Bolt**

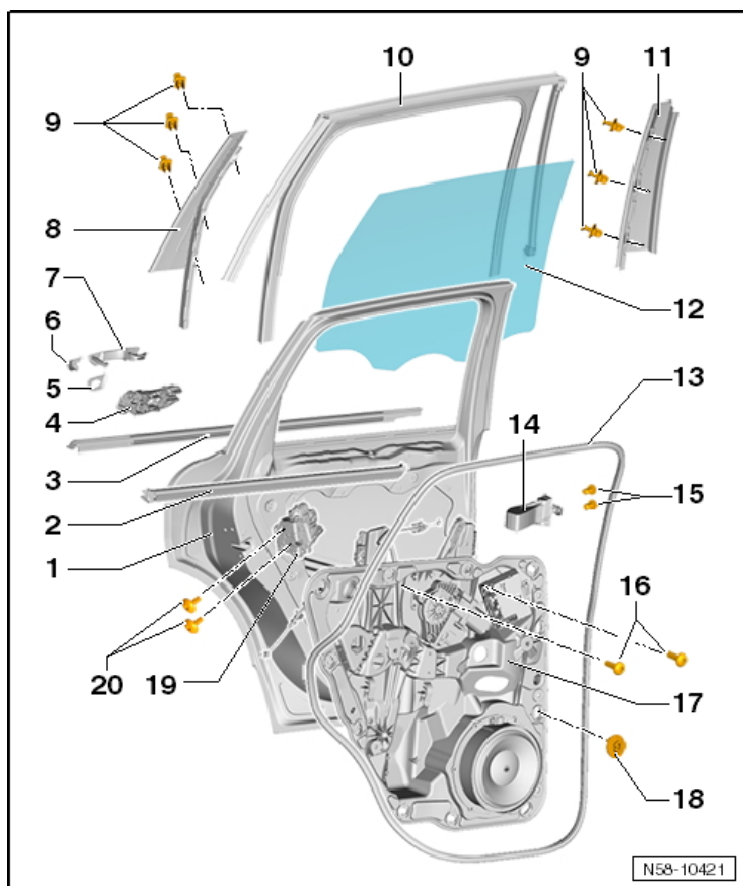
50 Nm

**15 - Door Hinge**

**16 - Bolt**

23 Nm

## Rear Door Assembly Overview



- 1 - Door
- 2 - Inner Window Recess Seal
- 3 - Outer Window Recess Seal
- 4 - Mounting Bracket
- 5 - Backing
- 6 - Covert
- 7 - Door Handle
- 8 - Trim
- 9 - Clip
- 10 - Window Guide
- 11 - Clip
- 12 - Door Window
- 13 - Outer Door Seal
- 14 - Door Strap
- 15 - Bolt
  - 9 Nm

**16 - Bolt**

8 Nm

**17 - Subframe**

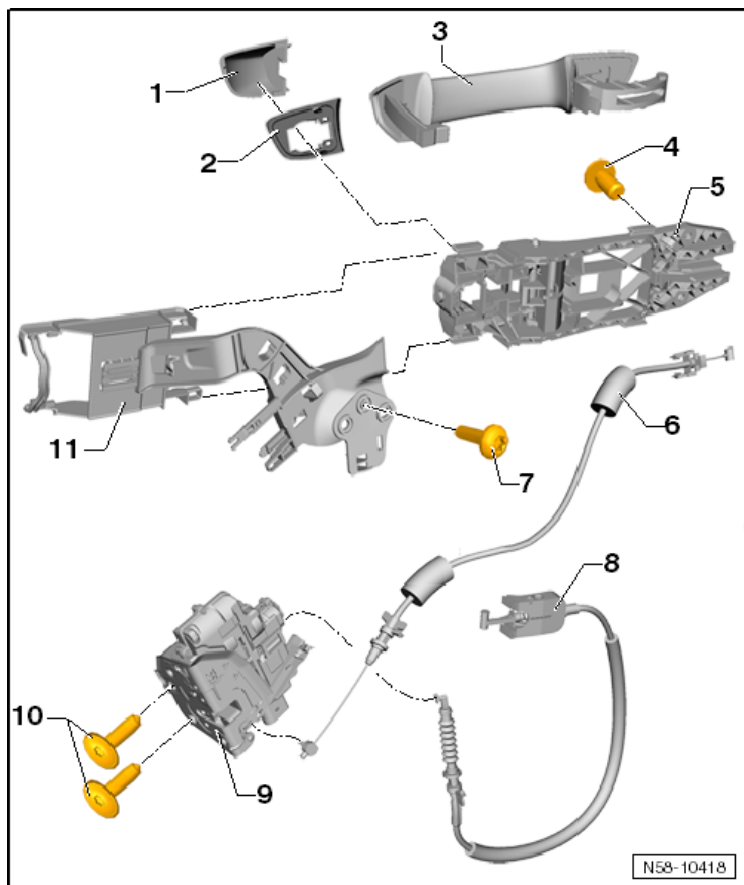
**18 - Clip**

**19 - Door Lock**

**20 - Bolt**

20 Nm

## Door Handle and Door Lock Assembly Overview

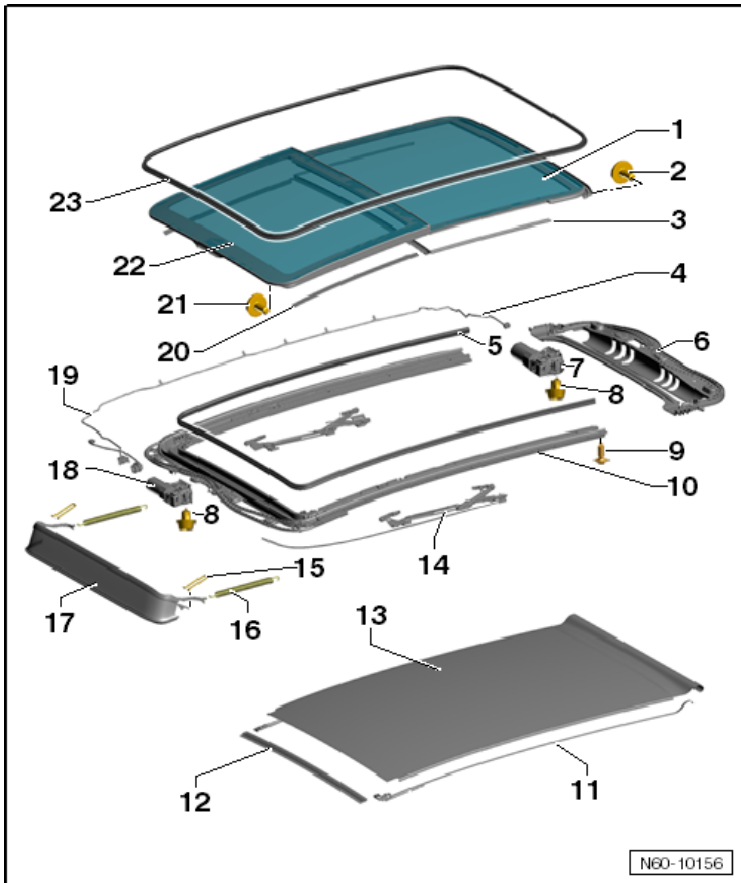


- 1 - Cover
- 2 - Backing
- 3 - Door Handle
- 4 - Bolt
  - 1 Nm
- 5 - Mounting Bracket
- 6 - Release Cable
- 7 - Bolt
  - 3.5 Nm
- 8 - Release Cable
- 9 - Door Lock
- 10 - Bolt
  - 20 Nm
- 11 - Angle Bracket



# Sunroof

## Panorama Sunroof Assembly Overview



1 - Rear Glass Panel

2 - Bolt

□ 7 Nm

3 - Seal

4 - Electrical Wiring

5 - Inner Seal

6 - Rear Lid Part

7 - Sunshade Motor

8 - Bolt

□ 8 Nm

9 - Bolt

□ 2 Nm

10 - Assembly Frame

11 - Cable

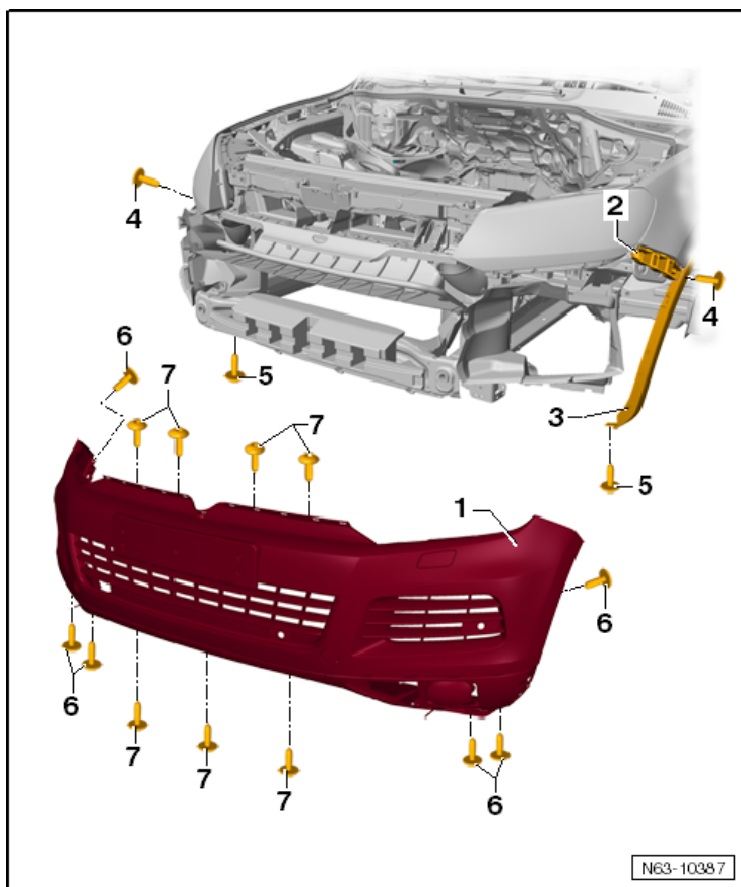
12 - Bow



- 13 - Sun Shade**
- 14 - Tilting Mechanism**
- 15 - Supporting Bracket**
- 16 - Pull-Spring**
- 17 - Wind Deflector**
- 18 - Sunroof Motor**
- 19 - Connectors**
- 20 - Trim**
- 21 - Bolt**
  - 7 Nm
- 22 - Front Glass Panel**
- 23 - Outer Seal**

# Bumpers

## Front Bumper Cover Assembly Overview



**1 - Front Bumper Cover**

**2 - Guide**

**3 - Front Wheel Trim**

**4 - Bolt**

3 Nm

**5 - Bolt**

2 Nm

**6 - Bolt**

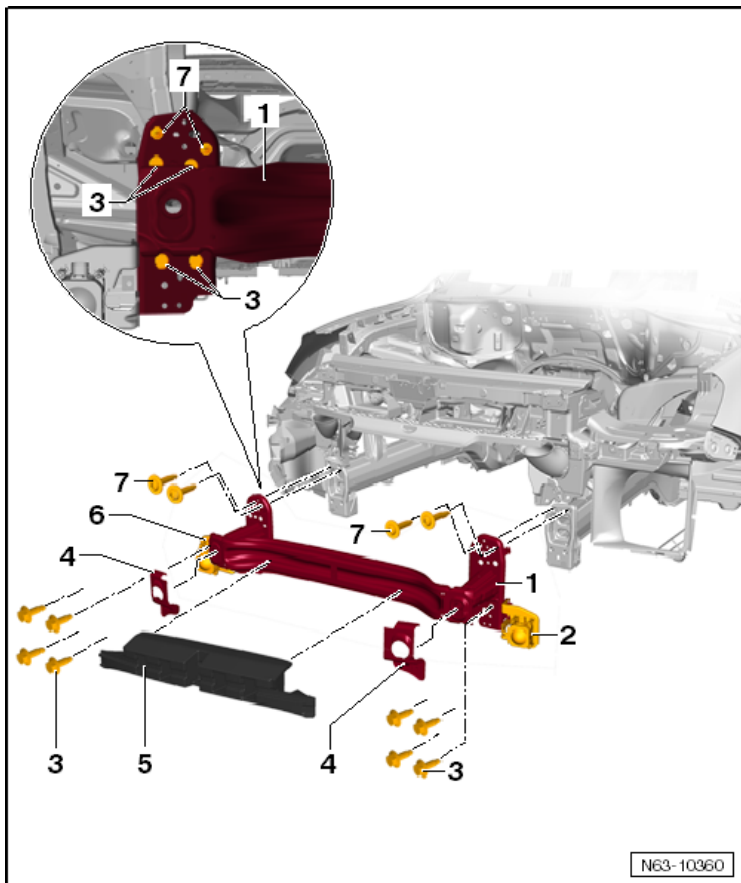
3 Nm

**7 - Bolt**

Upper threaded connection: 3 Nm

Lower threaded connection: 8 Nm

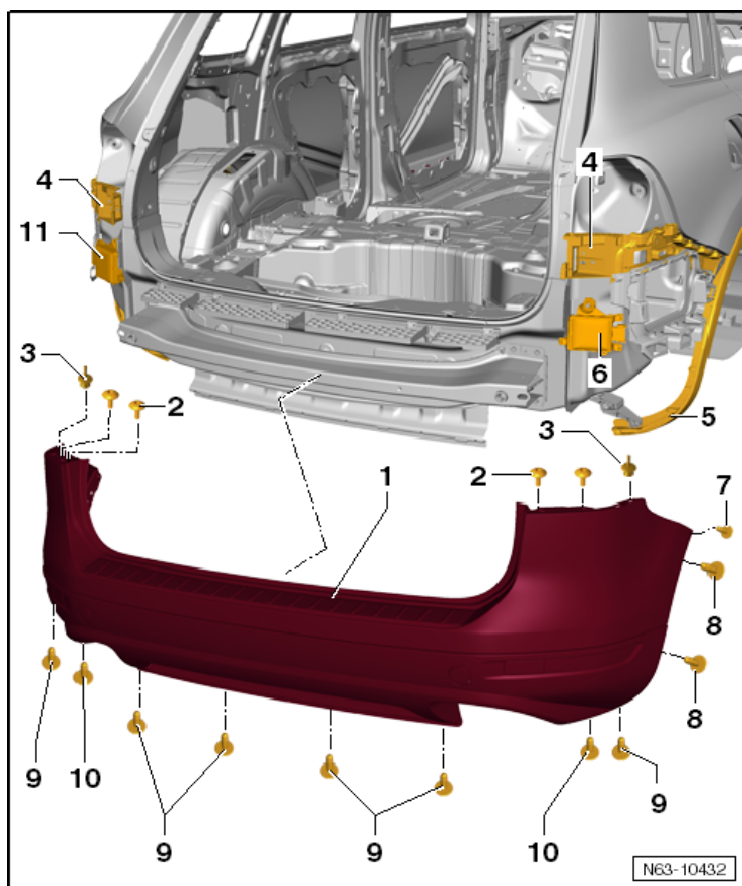
## Front Bumper Carrier Assembly Overview



Body

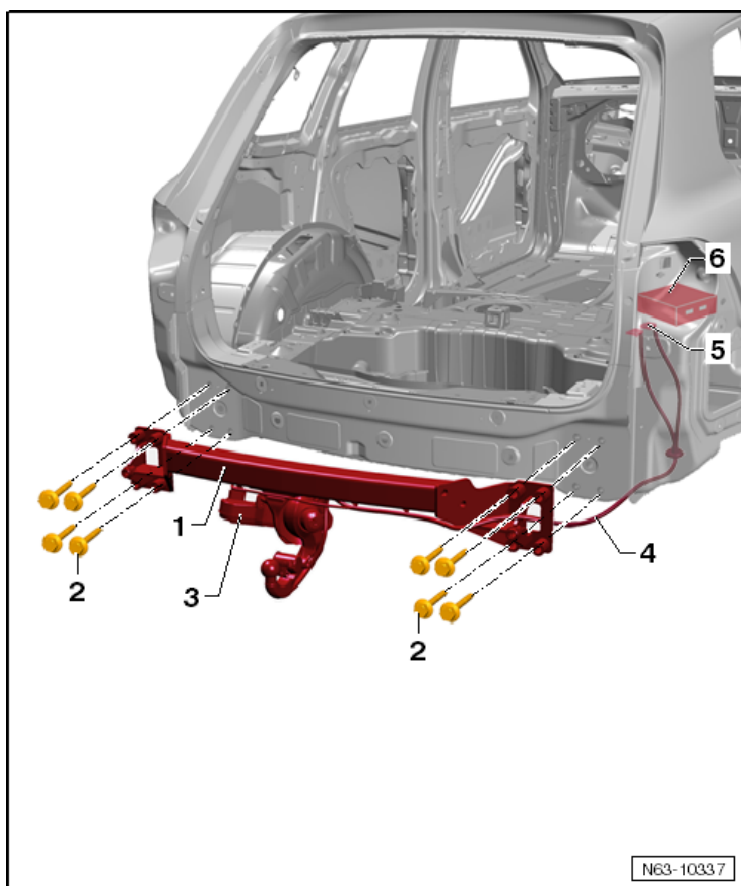
- 1 - Front Bumper Carrier
- 2 - Distance Regulation Control Module
- 3 - Bolt
  - 60 Nm
- 4 - Bumper Adjusting Piece
- 5 - Bolt
  - 20 Nm
- 6 - Foam Piece

## Rear Bumper Cover Assembly Overview



- 1 - Rear Bumper Cover
- 2 - Bolt
  - 3 Nm
- 3 - Clip
- 4 - Slide Guide
- 5 - Wheel Cover
- 6 - Lane Change Assistance Control Module 2 -J770- (Side Assist)
- 7 - Bolt
  - 3 Nm
- 8 - Bolt
  - 3 Nm
- 9 - Bolt
  - 3 Nm
- 10 - Bolt
  - 3 Nm
- 11 - Lane Change Assistance Control Module -J769- (Side Assist)

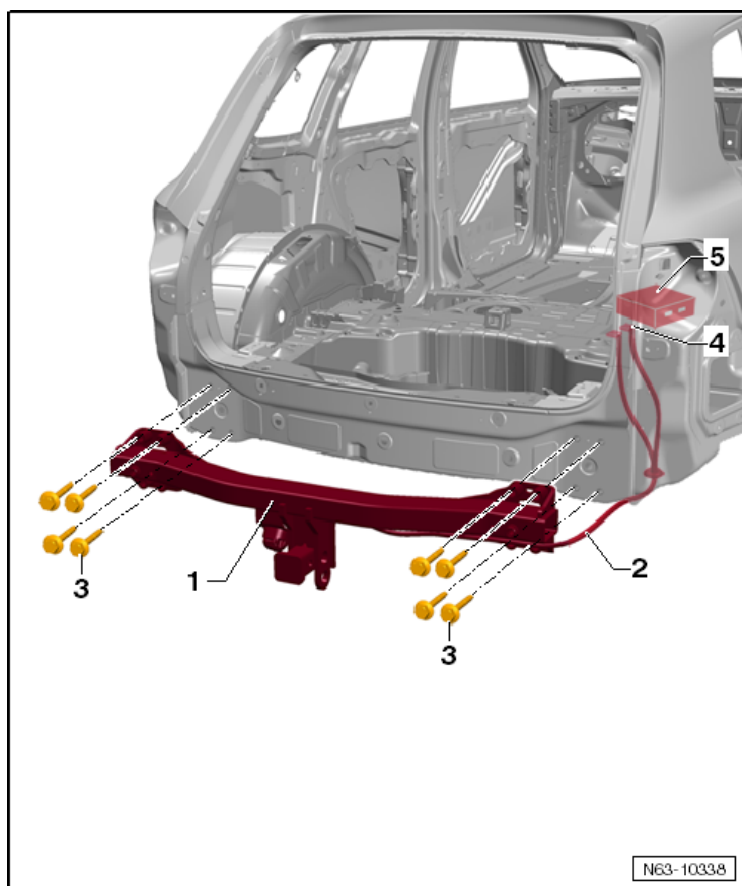
## Trailer Hitch Assembly Overview



Body

- 1 - Trailer Hitch
- 2 - Bolt
  - 110 Nm
- 3 - Wiring Harness
- 4 - Ball Head
- 5 - Connector
- 6 - Control Module

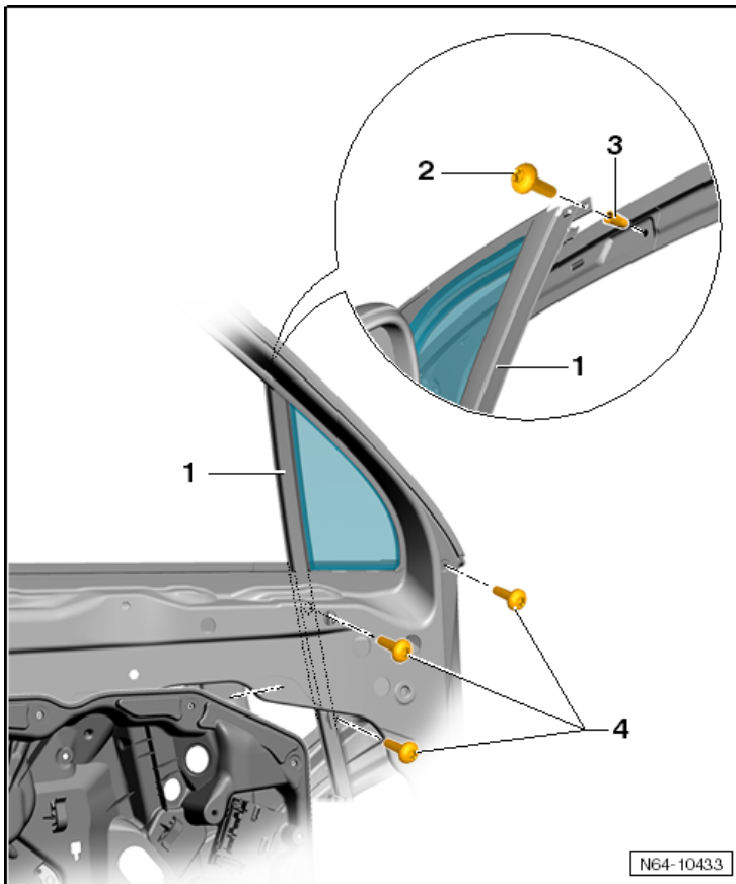
## Tow Hitch Assembly Overview



- 1 - Trailer Hitch
- 2 - Wiring Harness
- 3 - Bolt
  - 110 Nm
- 4 - Connector
- 5 - Control Module

# Glass, Window Regulators

## Fixed Door Glass Assembly Overview



Body

1 - Fixed Door Glass

2 - Bolt

□ 4.5 Nm

3 - Threaded Rivet

4 - Bolt

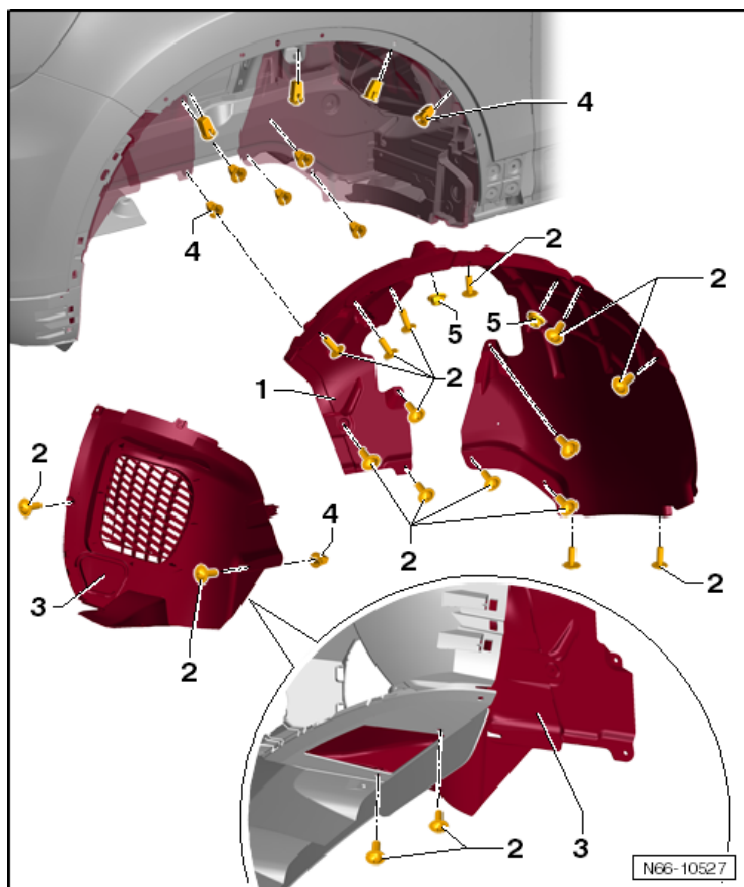
□ 4.5 Nm

### Tightening Specifications

Component	Nm
Front door window regulator bolt	3
Rear door window regulator bolt	3

## Exterior Equipment

### Front Wheel Housing Liner Assembly Overview



1 - Wheel Housing Liner

2 - Bolt

□ 2 Nm

3 - Wheel Housing Liner

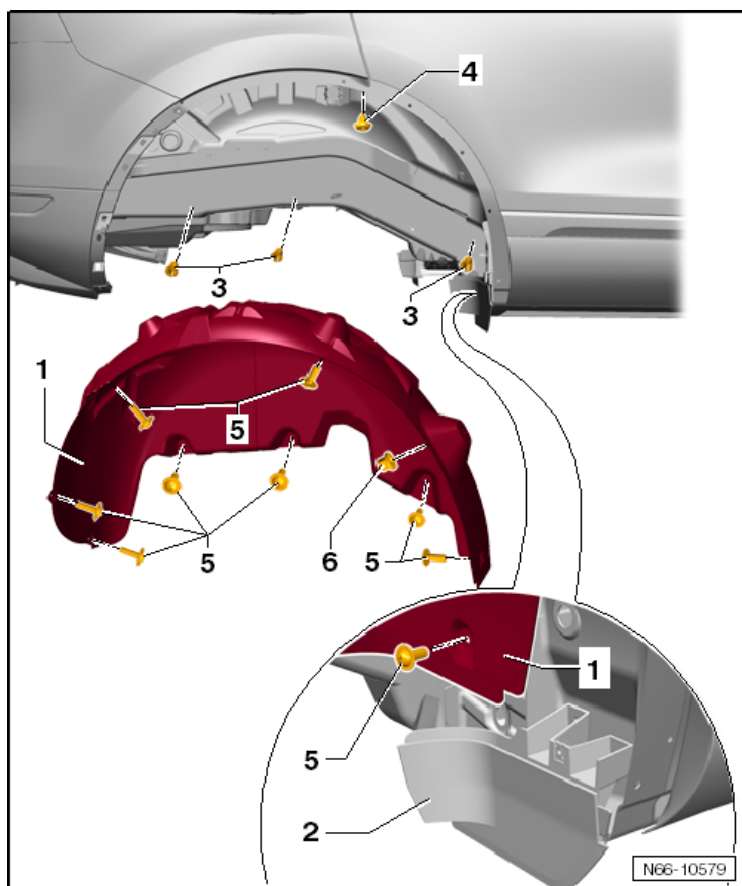
4 - Expanding Nut

5 - Hex Nut

□ 2.5 Nm



## Right Rear Wheel Housing Liner Assembly Overview



Body

1 - Right Rear Wheel Housing Liner

2 - Sill Panel Cover

3 - Expanding Nut

4 - Expanding Nut

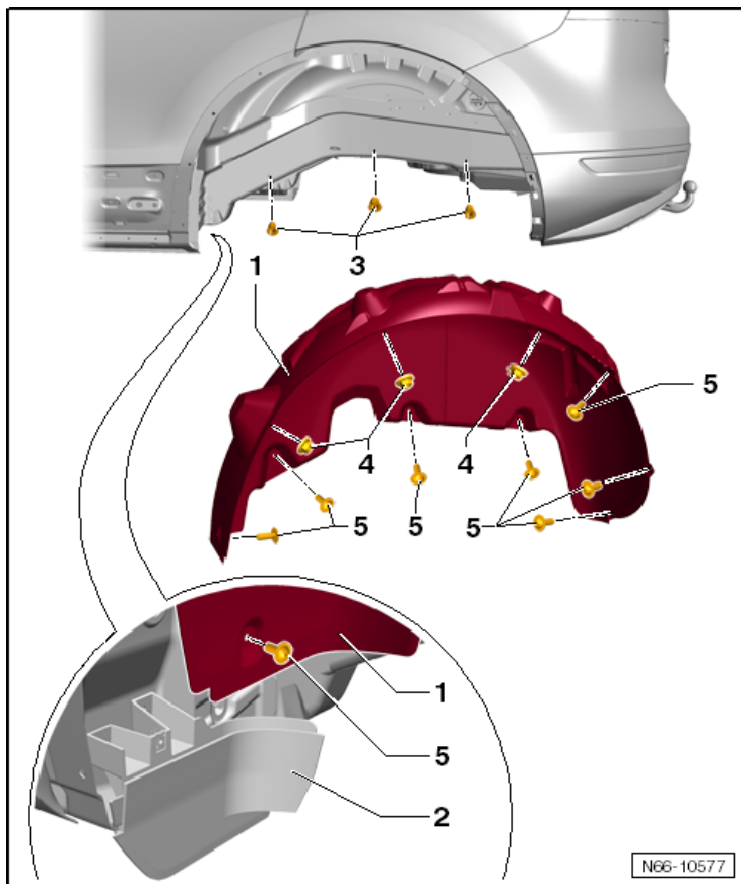
5 - Bolt

□ 2 Nm

6 - Hex Nut

□ 2.5 Nm

## Left Rear Wheel Housing Liner Assembly Overview



**1 - Left Rear Wheel Housing Liner Assembly Overview**

**2 - Sill Panel Cover**

**3 - Expanding Nut**

**4 - Hex Nut**

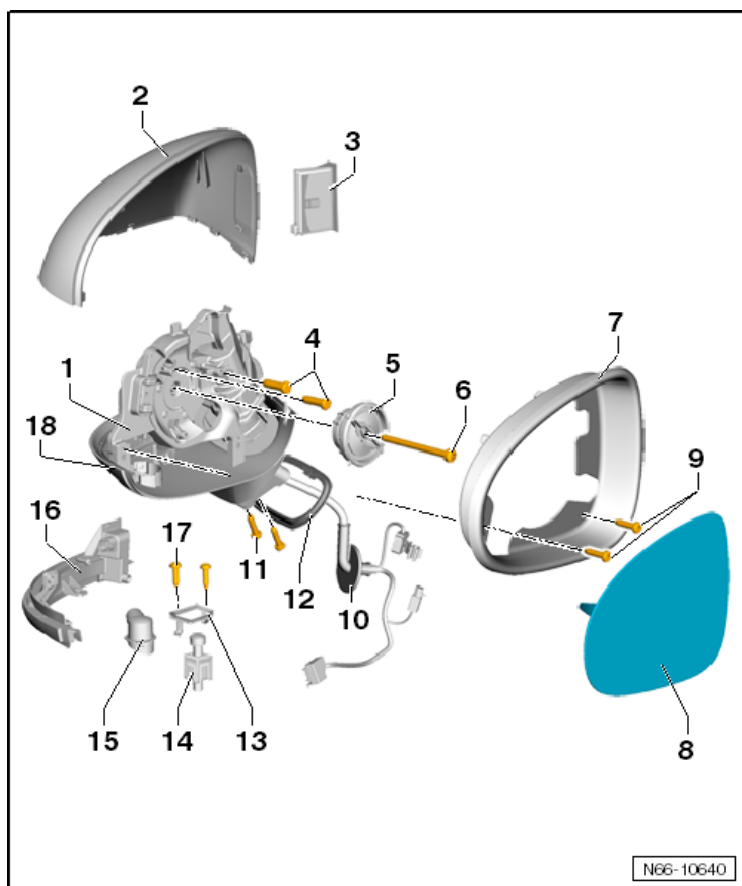
□ 2.5 Nm

**5 - Bolt**

□ 2 Nm



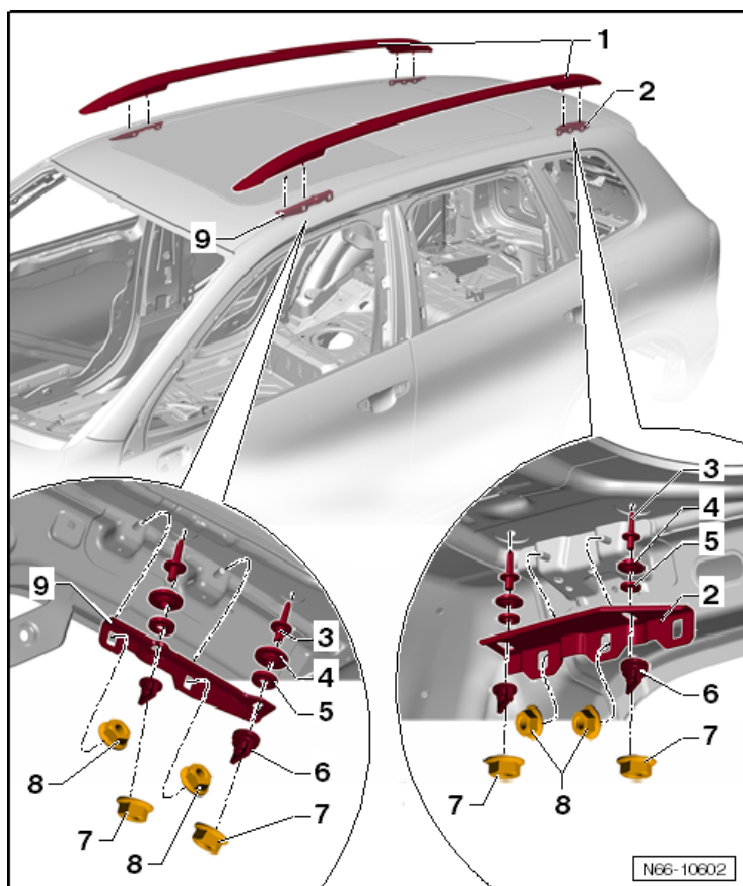
## Exterior Mirror Assembly Overview



- 1 - Mirror Base Plate
- 2 - Mirror Housing
- 3 - Lane Change Assist Warning Lights
- 4 - Bolt
  - 1 Nm
- 5 - Adjusting Unit with Motor
- 6 - Bolt
  - 1 Nm
- 7 - Frame
- 8 - Mirror Glass
- 9 - Bolt
  - 1 Nm
- 10 - Electrical Wiring
- 11 - Bolt
  - 9 Nm

- 12 - Seal**
- 13 - Bracket**
- 14 - Environmental Camera**
- 15 - Entry Lamp**
- 16 - Turn Signal**
- 17 - Bolt**
  - Not Applicable
- 18 - Trim**

## Roof Rail Assembly Overview



- 1 - Roof Rail
- 2 - Rear Angle Bracket
- 3 - Centering Pin
- 4 - Upper Conical Washer
- 5 - Lower Conical Washer
- 6 - Mounting Nut
- 7 - Hex Nut
  - 10 Nm
- 8 - Bolt
  - 10 Nm
- 9 - Front Angle Bracket

# Body Interior

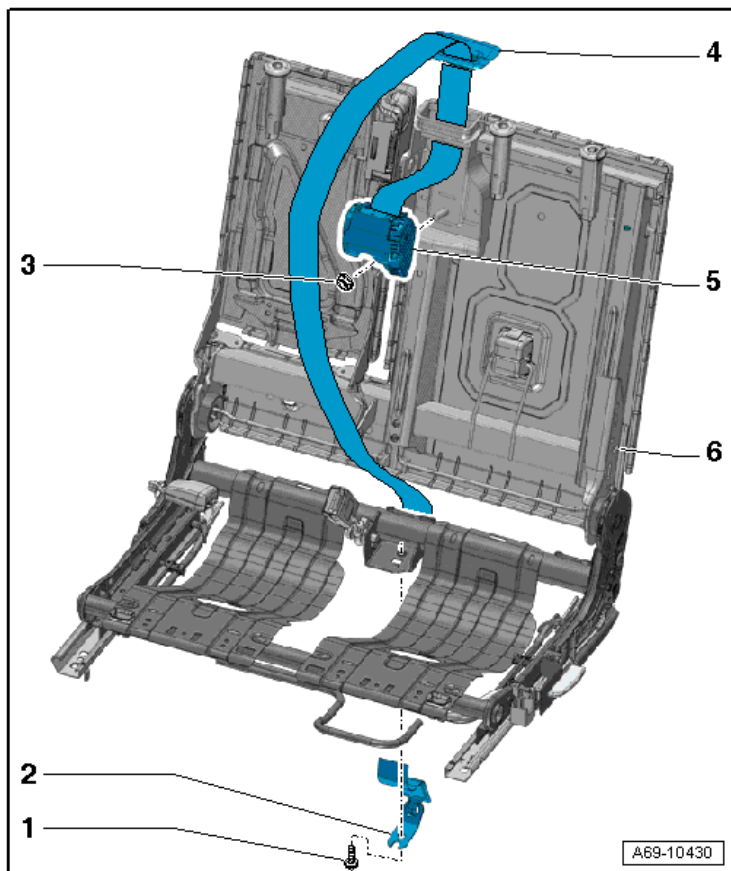
## Interior Equipment

### Tightening Specifications

Component	Nm
Roof grab handle bolt	3
Center armrest cupholder bolt	6
Driver side left instrument panel trim bolt	1.5
Footwell covers bolt	1.5
Front passenger frame bolt	1.5
Front passenger side right instrument panel trim bolt	1.5
Glove compartment bolt	6
Instrument panel housing cover bolt	1.5
Front center armrest bolt (rear)	1.5
Rear center console trim bolt	1.5
Steering column trim bolt	1.5
Sun visor bolt	3
Driver side deformation element bolt	1.5
Driver side deformation element bracket bolt	8
Driver side deformation element support bolt	9

# Passenger Protection, Airbags, Seat Belts

## Rear Center Seat Belt Assembly Overview



**1 - Bolt**

- 50 Nm

**2 - Belt Anchor**

**3 - Nut**

- 50 Nm
- If it was removed because of an accident, replace the nut

**4 - Cover**

**5 - Automatic Belt Retractor**

**6 - Left Two Third Rear Seat**



## Tightening Specifications

Component	Nm
Airbag control module (J234) nuts	9
Belt height adjustment bolt	20
Belt relay bolt	50
Crash sensor bolt	8
Knee airbag bolts	6
Knee airbag bracket bolts	8
Rear side airbag sensor screws	9
Seat belt anchor bolt	50
Seat belt latch bolt	50
Seat belt latch nut	50
Seat belt relay bolt	50
Side airbag bolts	9
Side airbag sensor screws	1
Side curtain cap nuts	9

Body

## Interior Trim

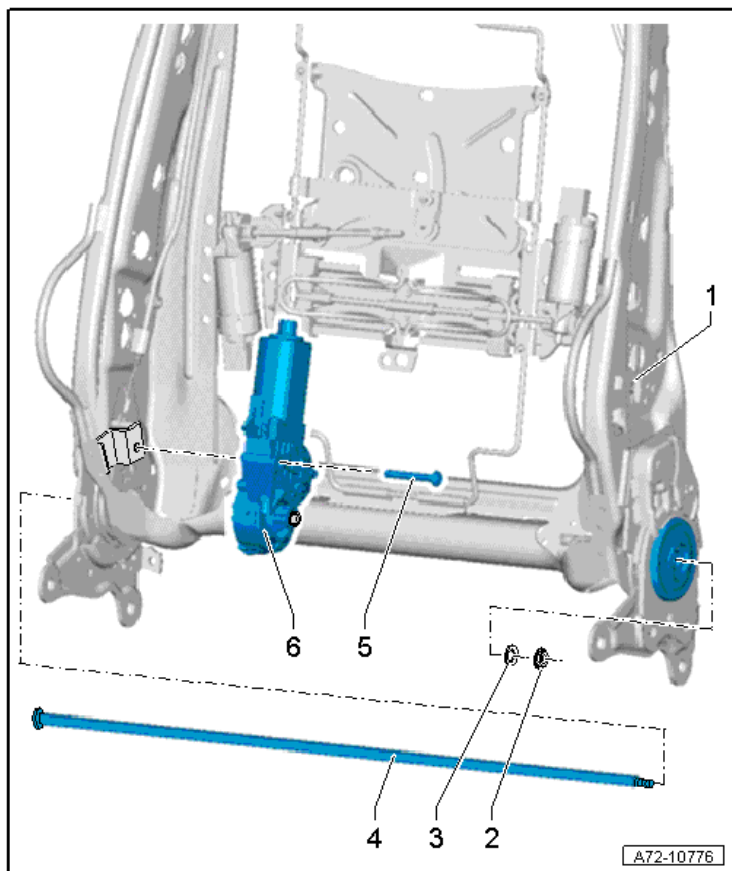
### Tightening Specifications

Component	Nm
A-pillar trim bolts	2
D-pillar trim bolts	3
Footrest trim bolts	1.5
Front door trim bolts	4.5
Instrument panel cross member bolts <sup>1)</sup>	1.5
	8
	10
	20
Instrument panel cover screws	1.5
Luggage compartment slide support bolts	8
Rear door trim bolts	4.5
Rear door pocket bolt	2
Rear lid trim bolts	1.5
Tie-down bracket bolts	8

<sup>1)</sup> For bolt tightening clarification, refer to ElsaWeb, *Interior Trim, Instrument Panel Crossmember*.

## Seat Frames

### Backrest Adjustment Motor Assembly Overview



**1 - Backrest Frame**

**2 - Nut**

6 Nm

Replace

**3 - Washer**

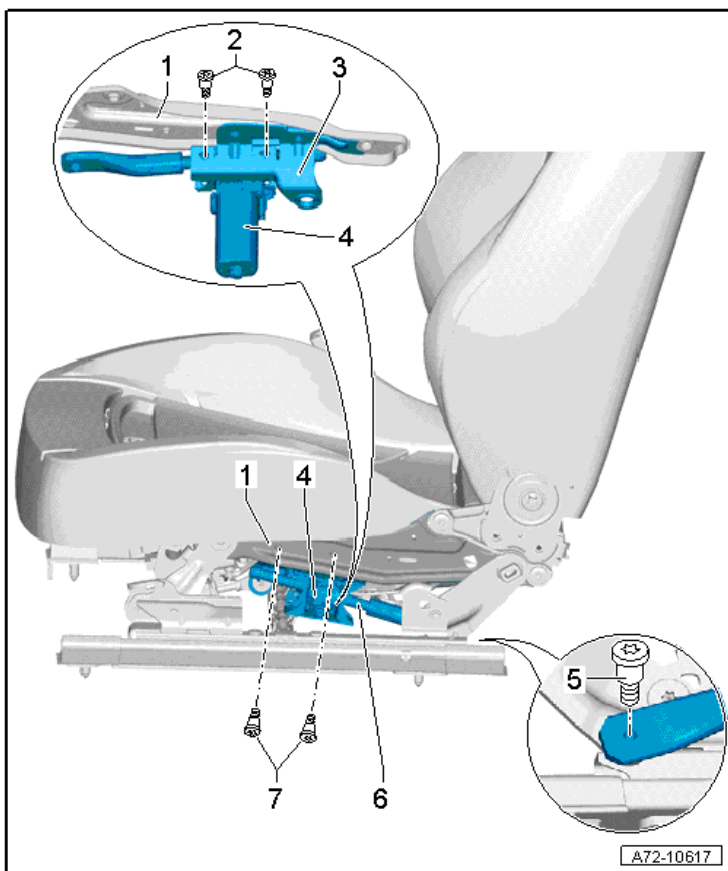
**4 - Shaft**

**5 - Bolt**

7.5 Nm

**6 - Backrest Adjustment Motor**

## Seat Height Adjustment Motor Assembly Overview



Body

**1 - Lower Seat Frame**

**2 - Bolt**

- 10 Nm
- Always replace if removed

**3 - Bracket**

**4 - Seat Height Adjustment Motor**

**5 - Bolt**

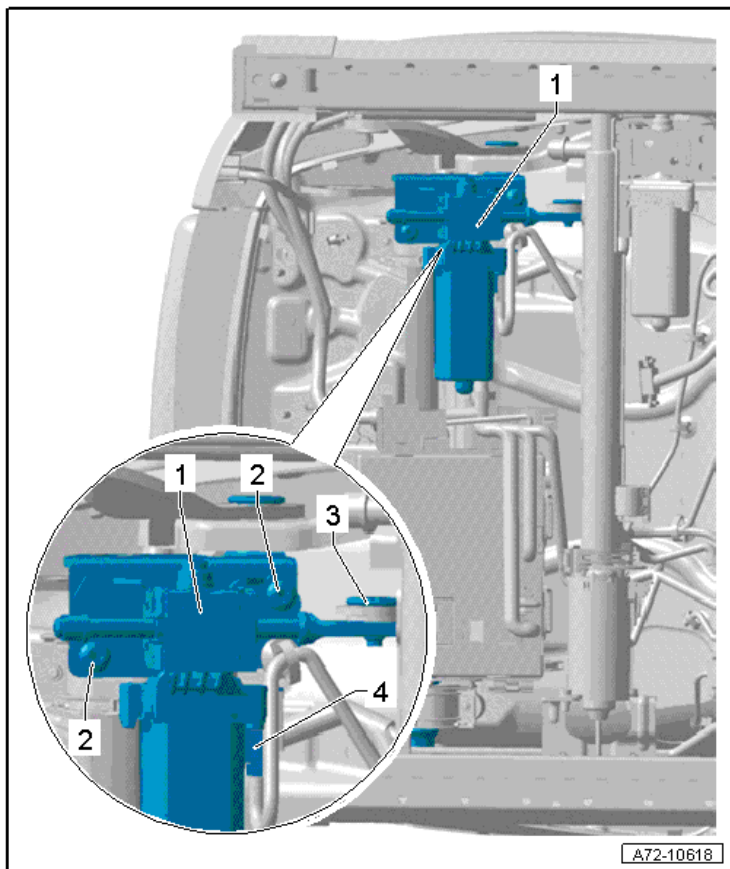
- 18 Nm
- Always replace if removed

**6 - Adjusting Spindle**

**7 - Bolt**

- 28 Nm
- Always replace if removed

## Seat Angle Adjustment Motor Assembly Overview



**1 - Seat Angle Adjustment Motor**

**2 - Bolts**

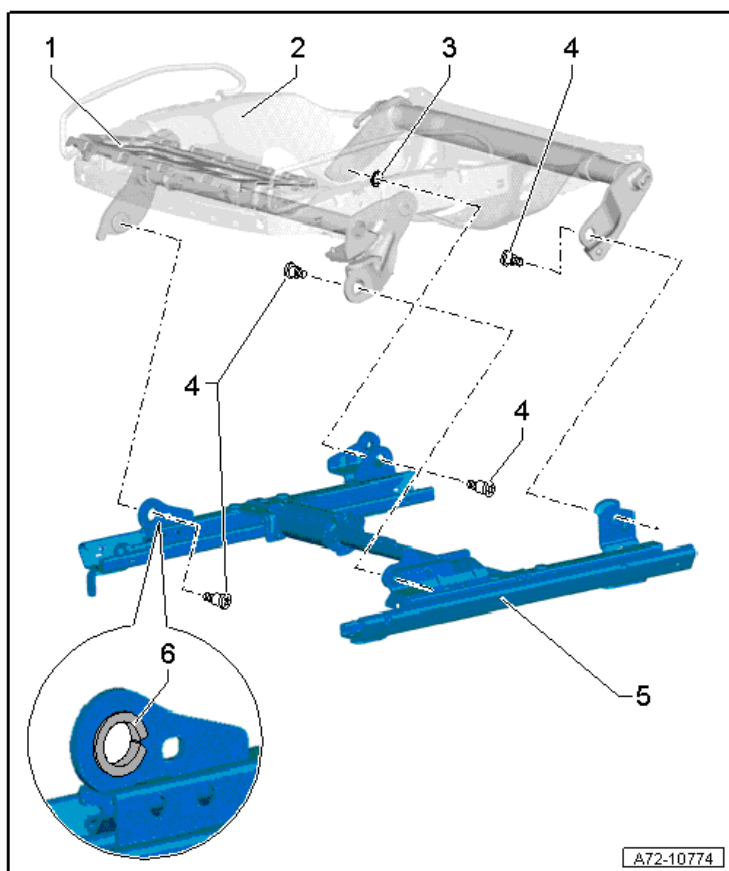
- 10 Nm
- Always replace if removed

**3 - Bolt**

- 10 Nm
- Always replace if removed

**4 - Connector**

## Lower Seat Frame Assembly Overview



Body

- 1 - Cushioned Cover
- 2 - Upper Seat Frame
- 3 - Washer
- 4 - Bolt
  - 22 Nm
  - Replace
- 5 - Lower Seat Frame
- 6 - Bushing

## Tightening Specifications

<b>Component</b>	<b>Nm</b>
Seat angle adjustment motor to seat frame bolt	20
Rear seat center armrest bolt	8
Rear seat inner trim bolt	2
Rear seat outer trim bolt	2
Rear seat pass through fitting bolt	18 ± 1
Rear 2/3 and 1/3 seat unit bolt	50 ± 7.5
Rear seat backrest bolt (outer)	36
Rear seat backrest bolt (inner)	50
Rear seat backrest release motor bolt	2

# HEATING AND 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 Specification

Component	Nm
Auxiliary air heater heating element ground wire connection	9
Coolant shut-off valve bolt	8 ± 0.9
Coolant shut-off valve nut	6 ± 0.5

# Air Conditioning

## Fastener Tightening Specifications

Component	Nm
Belt tensioner <sup>1) 4)</sup>	25 ± 3
Belt tensioner <sup>1) 5)</sup>	40 ± 3
Bracket cover retaining nuts <sup>1)</sup>	9
Compressor bracket-to-block <sup>1)</sup>	40 ± 3
Compressor-to-bracket <sup>1) 2)</sup>	25 ± 3
Compressor to bracket <sup>3)</sup> (M10 x 100)	45 ± 3
Condenser fittings	12 ± 1.5
Coolant pipe bolts <sup>1)</sup>	9
Drier cartridge cover	12 ± 2
Expansion valve	10 ± 1
High pressure sensor	8 ± 1
Indirect ventilation door motors	1.5
Refrigerant lines-to-A/C compressor	20 ± 3

<sup>1)</sup> TDI

<sup>2)</sup> 3.6L

<sup>3)</sup> Hybrid

<sup>4)</sup> For bolt tightening clarification, refer to ElsaWeb, *A/C Compressor*, item 15.

<sup>5)</sup> For bolt tightening clarification, refer to ElsaWeb, *A/C Compressor*, item 16.



# ELECTRICAL SYSTEM

## *Electrical Equipment*

### Battery, Starter, Generator, Cruise Control Tightening Specifications

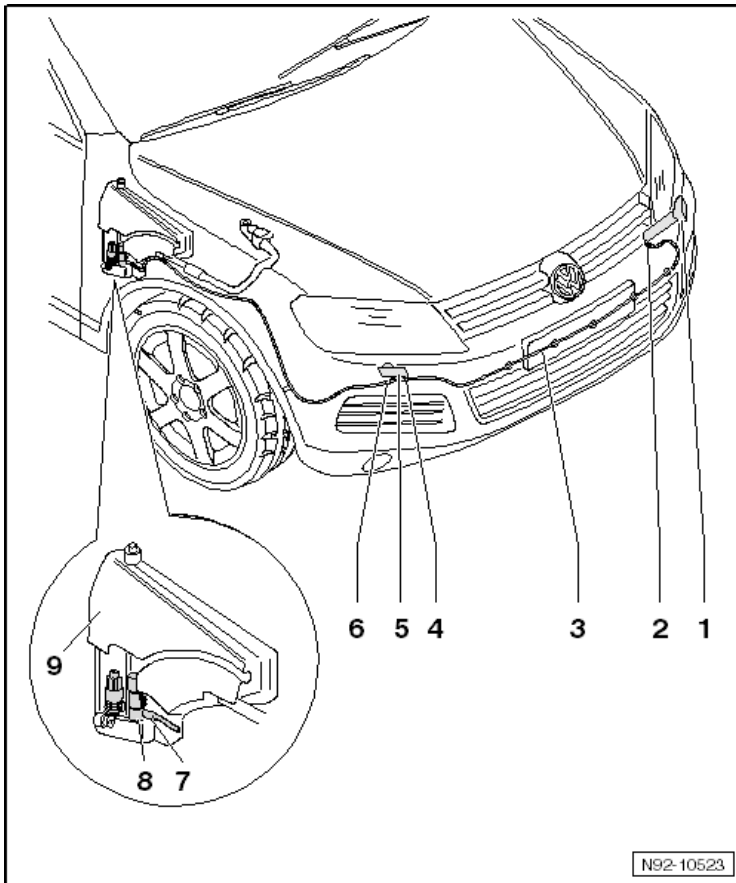
Component	Fastener size	Nm
Battery cap nut	-	20
Battery terminal	-	6
Battery interrupt igniter	-	20
Battery hold-down (lower) bolt	-	10
Battery retainer (upper) bolt	-	9
Jump start point B+ wire	-	20
Jump start point cable	-	4
Jump start terminal housing bracket	-	9
<b>3.6L</b>		
B+ wire-to-generator	M8	15
B+ wire-to-starter solenoid switch nut	M8	15
Belt tensioner bolts	M8 x 30	20
Generator collar bolts	M8 x 90	20
Starter collar bolts	M12 x 60	75
<b>TDI</b>		
B+ wire-to-generator	-	20
B+ wire-to-starter solenoid switch nut	M8	20
Generator bolt	M8 x 90	22
Ground cable-to-starter bolt	M8	20
Idler pulley bracket hex head combination bolt	M10 x 35	40
Idler pulley, bolt	M8 x 25	23
Lower starter bolt	M8	22
Lower starter bolt without 16 mm open ring spanner -T10388-	-	65
Ribbed belt pulley	-	25 plus an additional 60° ( $\frac{1}{6}$ turn)
Upper starter bolt	M10	42
Upper starter bolt without -T10388-	-	65
Upper starter bolt with 16 mm open ring spanner T10388 & Torque wrench VAS 5820	-	50
Upper starter bolt with T10388 & Torque wrench V.A.G 1332/	-	53
Voltage regulator	-	4

## Instruments Tightening Specifications

<b>Component</b>	<b>Nm</b>
Instrument cluster trim screws	1.5

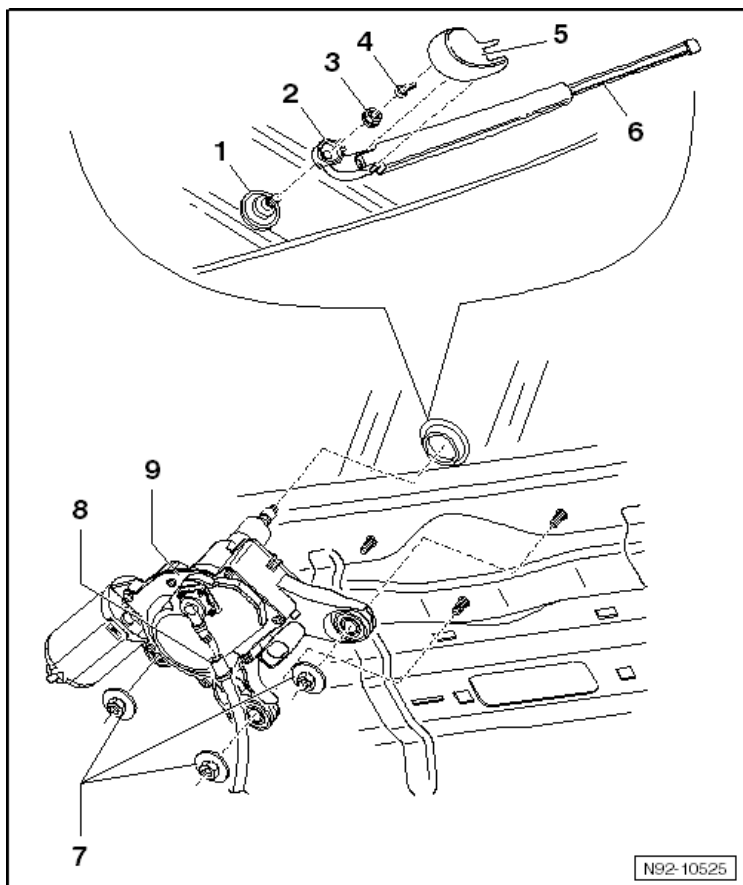
# Windshield Wiper/Washer System

## Headlamp Washer System Overview



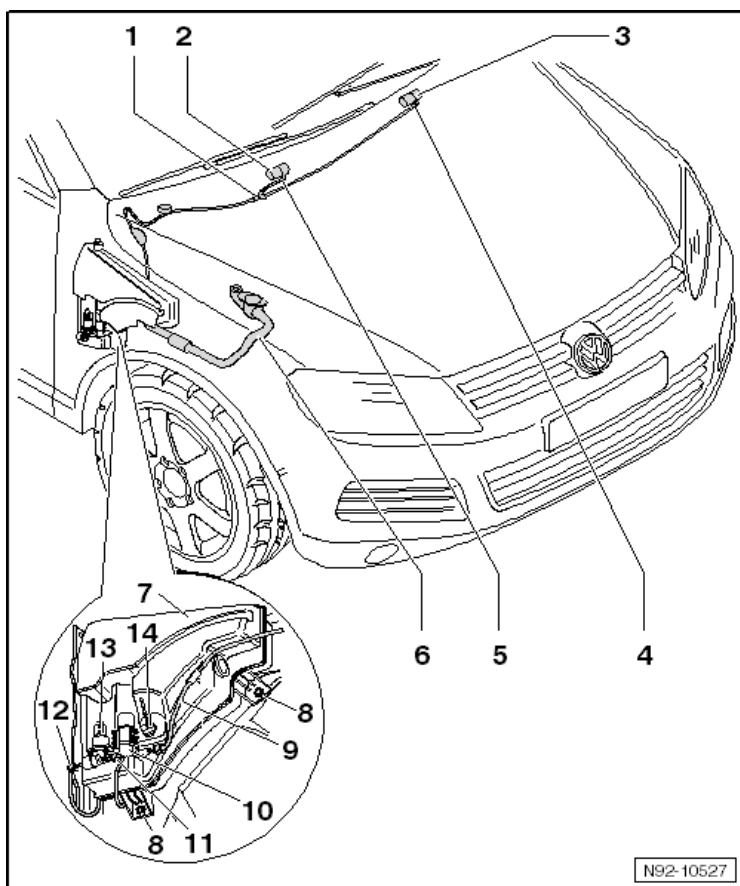
- 1 - Lift Cylinder For Left Washer
  - 2 Nm
- 2 - Connecting Piece
- 3 - Hose
- 4 - Angle Coupling
- 5 - Lift Cylinder For Right Washer
  - 2 Nm
- 6 - Y-Connection
- 7 - Connecting Piece
- 8 - Headlamp Washer System Pump -V11-
- 9 - Washer Fluid Reservoir

## Rear Window Wiper System Overview



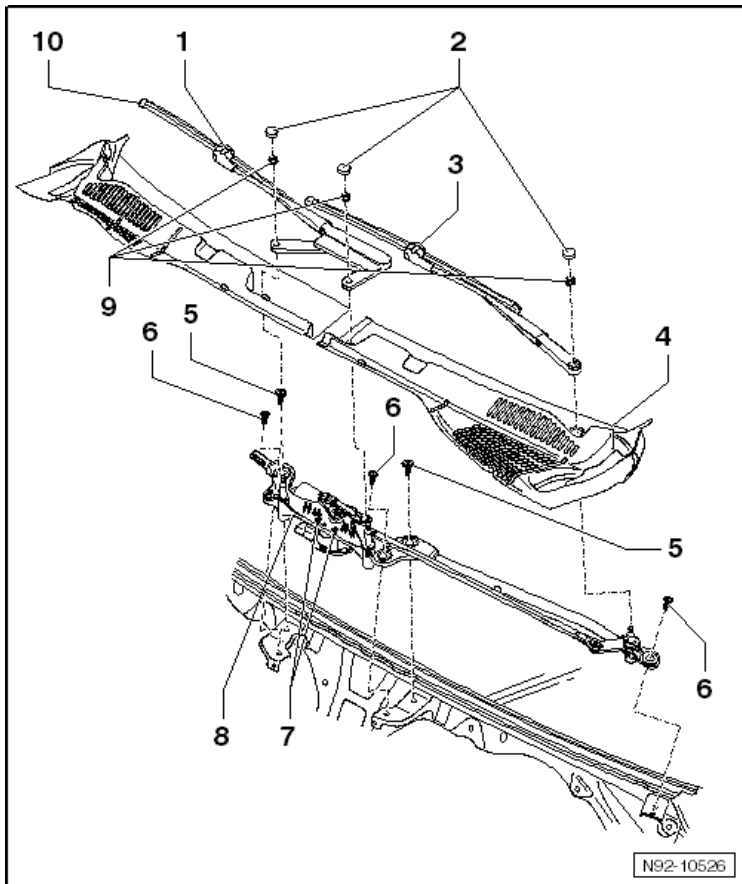
- 1 - Rubber Seal Inside The Rear Window
- 2 - Wiper Arm
- 3 - Wiper Arm Nut On Wiper Arm Shaft
  - 12 Nm
- 4 - Spray Nozzle For Rear Window Washer System
- 5 - Cap
- 6 - Windshield Wiper
- 7 - Wiper Motor Nuts To Rear Lid
  - 8 Nm
- 8 - Windshield Washer Hose Connection
- 9 - Rear Window Wiper Motor -V12-

## Windshield Washer System Overview



- 1 - Y-Connection
- 2 - Right Washer Nozzle
- 3 - Left Washer Nozzle
- 4 - Angle Coupling
- 5 - Angle Coupling
- 6 - Windshield Washer System Reservoir Filler Tube
- 7 - Washer Fluid Reservoir
- 8 - Screws
  - 6 Nm
  - M6 x 16
- 9 - Hose With Angle Connector
- 10 - Headlamp Washer System Pump
- 11 - Angle Coupling
- 12 - Angle Coupling
- 13 - Windshield and Rear Window Washer Pump -V59-
- 14 - Windshield Washer Fluid Level Sensor -G33-

## Windshield Wiper System Overview



**1 - Wiper Arm, Passenger Side**

**2 - Cap**

**3 - Driver Side Wiper Arm**

**4 - Plenum Chamber Cover**

**5 - Bolts for Wiper Frame With Linkage to Body**

9 Nm

M6 x 35 combi bolt

**6 - Bolts for Wiper Frame With Linkage to Body**

9 Nm

M6 x 30 combi bolt

**7 - Wiper Motor To Wiper Frame Bolts**

9 Nm

M6 x 19 thread grooving screw

**8 - Windshield Wiper Motor -V- With Linkage**

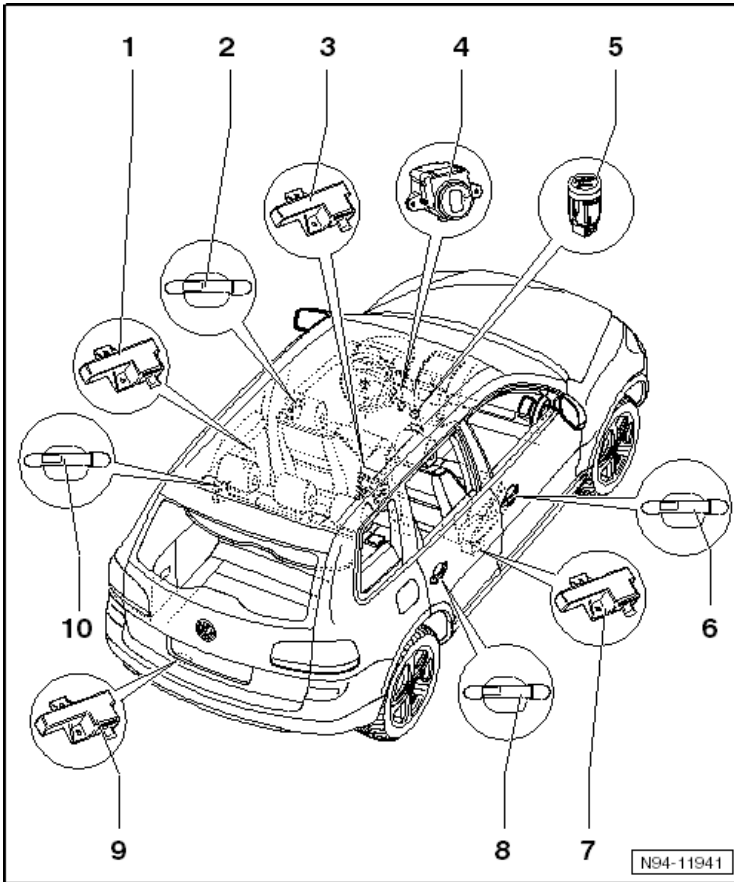
**9 - Wiper Arm Nut on Wiper Arm Shaft**

M10: 32 Nm

**10 - Windshield Wiper**

# Exterior Lights, Switches

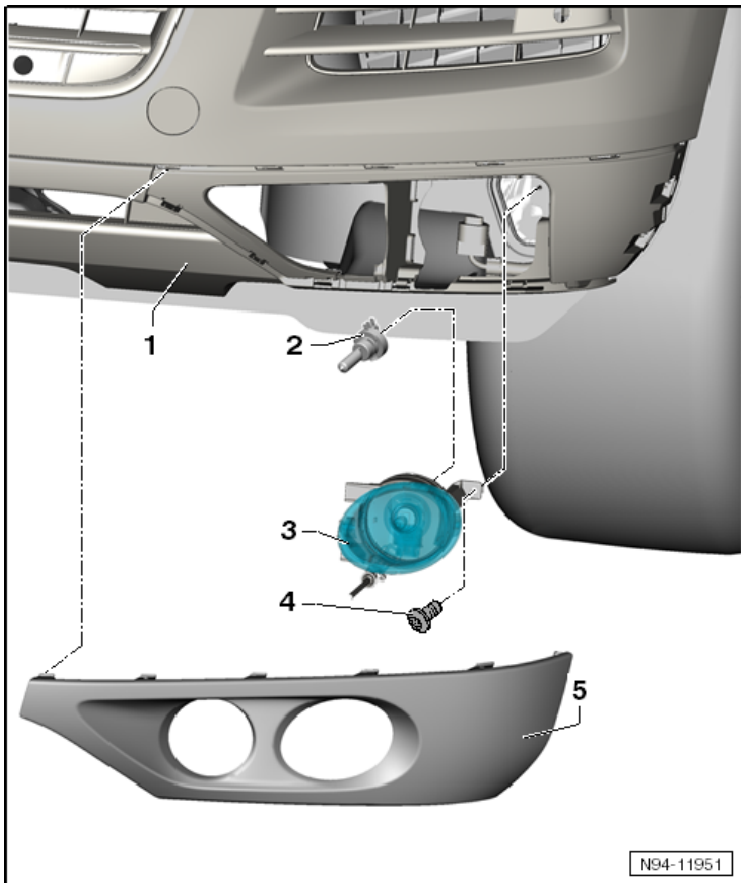
## Access/Start Authorization Antennas and Sensors Overview



- 1 - Left Access/Start Authorization Antenna -R200-**
  - 2 Nm
- 2 - Driver Side Outside Door Handle**
- 3 - Access/Start System Antenna 1 In Vehicle Interior -R138-**
  - 2 Nm
- 4 - Access/Start Authorization Switch -E415-**
- 5 - Access/Start Authorization Button -E408-**
- 6 - Front Passenger Exterior Door Handle**
- 7 - Right Access/Start Authorization Antenna -R201-**
  - 2 Nm
- 8 - Right Rear Outside Door Handle**
- 9 - Access/Start System Antenna In Luggage Compartment -R137-**
  - 2 Nm

## 10 - Rear Left Outer Door Handle

### Fog Lamps Overview



1 - Bumper Cover

2 - Fog Lamp Bulb

3 - Fog Lamps

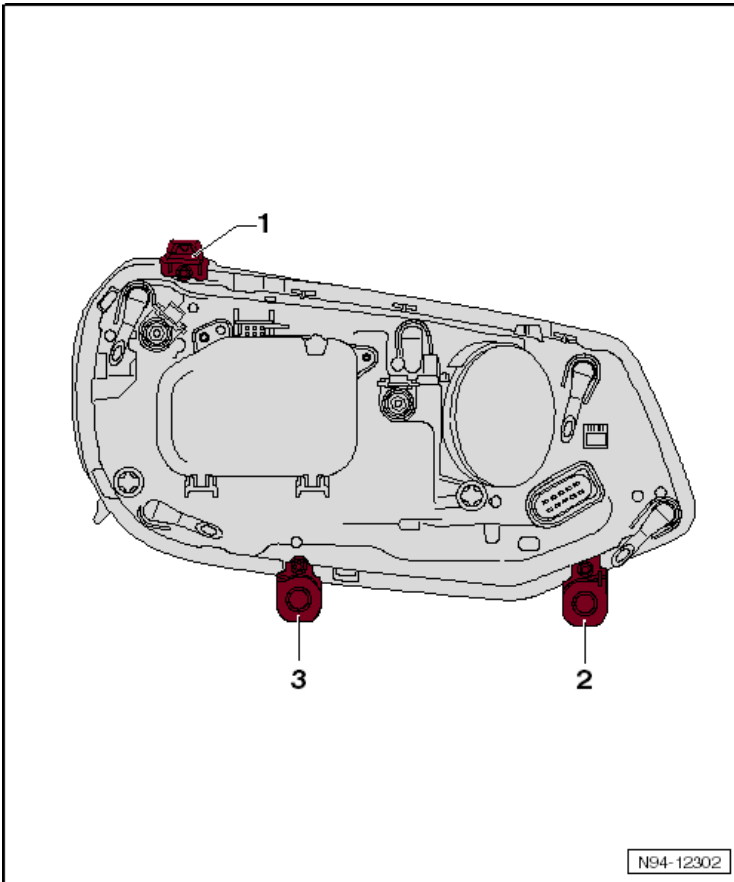
4 - Bolt

□ 8 Nm

5 - Fog Lamp Trim Inside The Bumper Cover

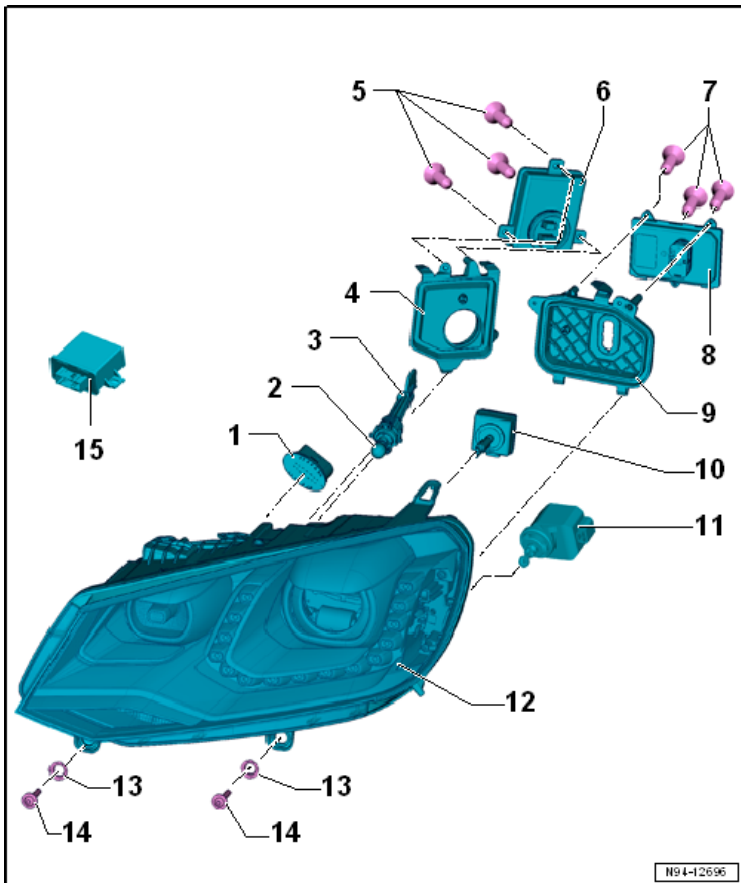


## Headlamp Mounting Tabs Overview



- 1 - Upper Headlamp Mounting Tab**
  - 1 Nm
- 2 - Lower Inner Headlamp Mounting Tab**
  - 1 Nm
- 3 - Lower Outer Headlamp Mounting Tab**
  - 1 Nm

## HID Headlamp with Cornering Lamp and LED Daytime Running Lamp Overview



- 1 - Left Side Marker Lamp Bulb -M1- and Right Side Marker Lamp Bulb -M3-
- 2 - Left Front Turn Signal Bulb -M5- and Right Front Turn Signal Bulb -M7-
- 3 - Lamp Socket With Grip
- 4 - Cap
- 5 - Screws
- 6 - Screws
- 7 - Screws
- 8 - Left Headlamp Power Output Stage -J667- or Right Headlamp Power Output Stage -J668-
- 9 - Cap
- 10 - Left HID Headlamp Bulb -L13- and Right HID Headlamp Bult -L14- ("Bi-Xenon")
- 11 - Left Headlamp Beam Adjustment Motor -V48- and Right Headlamp Beam Adjustment Motor -V49-

**12 - Headlamps**

**13 - Adjustment Bushing**

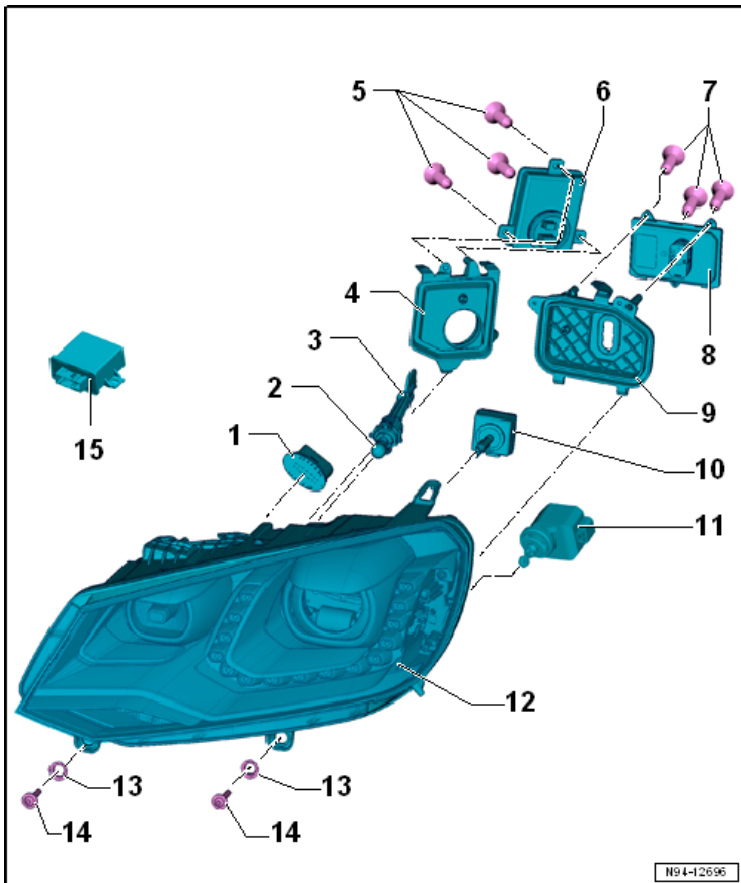
**14 - Screws**

5 Nm

**15 - Cornering Lamp and Headlamp Range Control Module -J745-**

2 Nm

## HID Headlamp with Dynamic High Beam Control Overview



- 1 - Left Side Marker Lamp Bulb -M1- and Right Side Marker Lamp Bulb -M3-
- 2 - Left Front Turn Signal Bulb -M5- and Right Front Turn Signal Bulb -M7-
- 3 - Lamp Socket With Grip
- 4 - Cap
- 5 - Screws
- 6 - Screws
- 7 - Screws
- 8 - Left Headlamp Power Output Stage -J667- or Right Headlamp Power Output Stage -J668-
- 9 - Cap
- 10 - Left HID Headlamp Bulb -L13- and Right HID Headlamp Bult -L14- ("Bi-Xenon")
- 11 - Left Headlamp Beam Adjustment Motor -V48- and Right Headlamp Beam Adjustment Motor -V49-

**12 - Headlamps**

**13 - Adjustment Bushing**

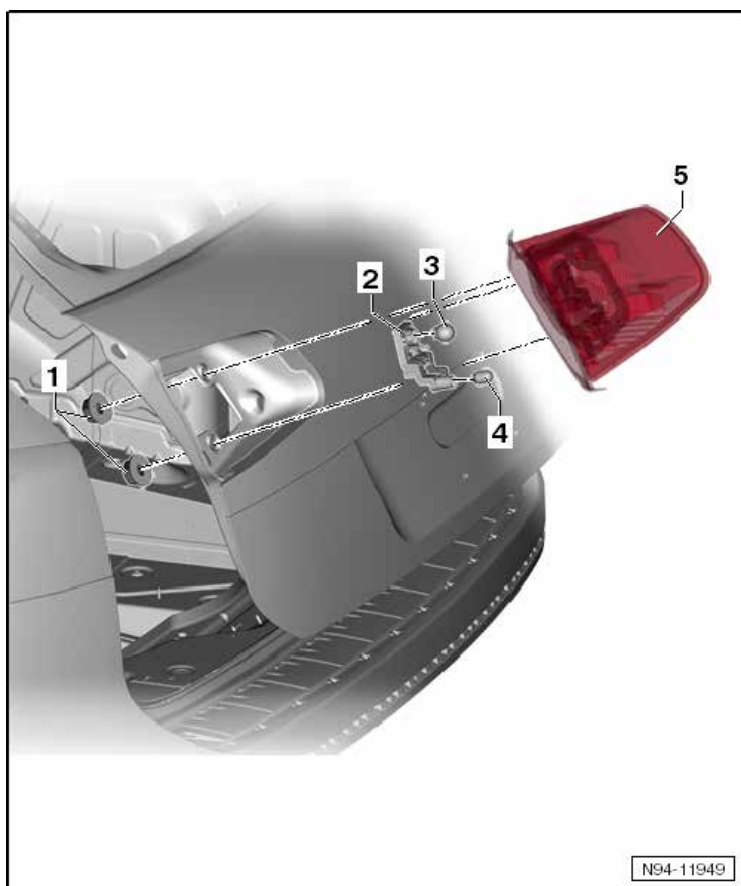
**14 - Screws**

5 Nm

**15 - Cornering Lamp and Headlamp Range Control Module -J745-**

2 Nm

## Rear Lid Tail Lamps Overview



**1 - Nuts**

□ 3 Nm

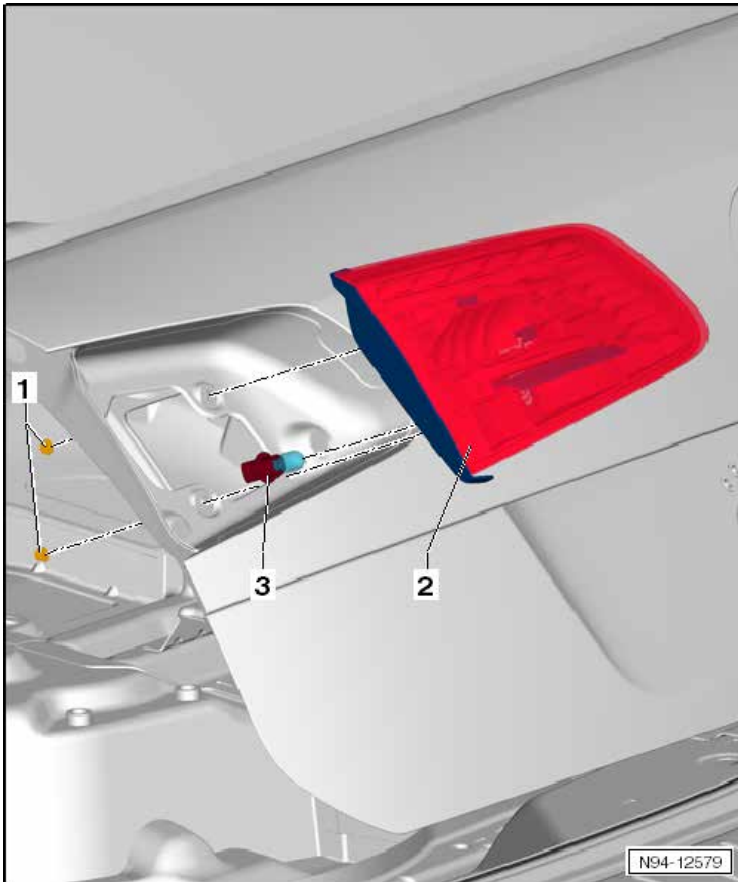
**2 - Bulb Holder**

**3 - Left Tail Lamp Bulb 2 -M49- and Right Tail Lamp Bulb 2 -M50-**

**4 - Left Back-Up Lamp -M16- and Right Back-Up Lamp -M17-**

**5 - Tail Lamp Housing**

## Rear Lid Tail Lamps with LEDs Overview



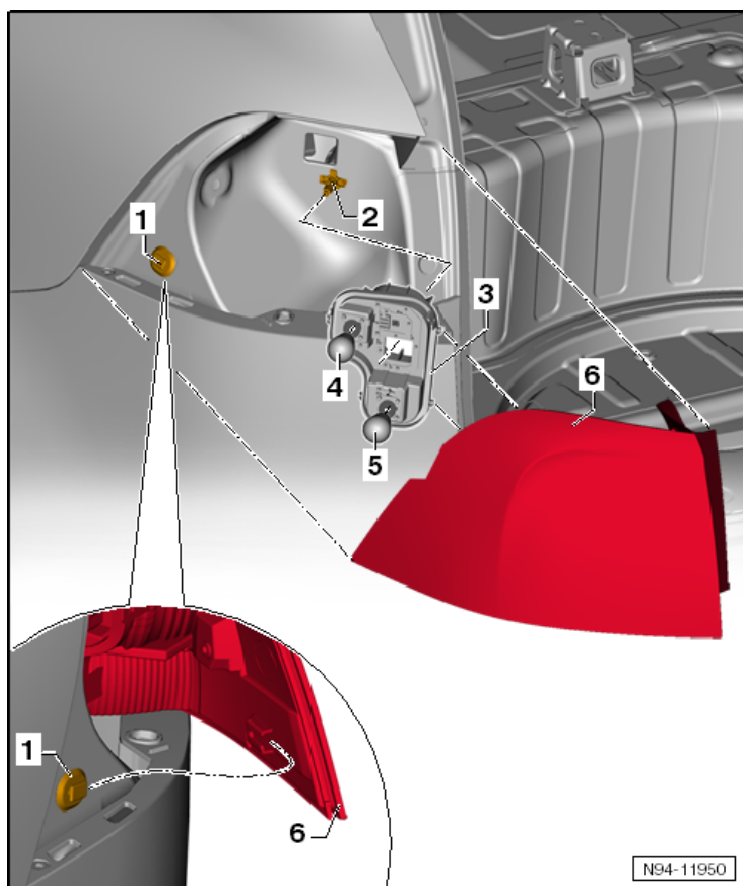
### 1 - Nuts

□ 3 Nm

### 2 - Tail Lamp Housing

### 3 - Left Back-Up Light -M16- and Right Back-Up Light -M17-

## Side Panel Tail Lamps Overview



**1 - Clip Inside The Side Panel**

**2 - Bolt**

□ 2 Nm

**3 - Bulb Holder**

**4 - Left Brake/Tail Light -M21- and Right Brake/Tail Light -M22-**

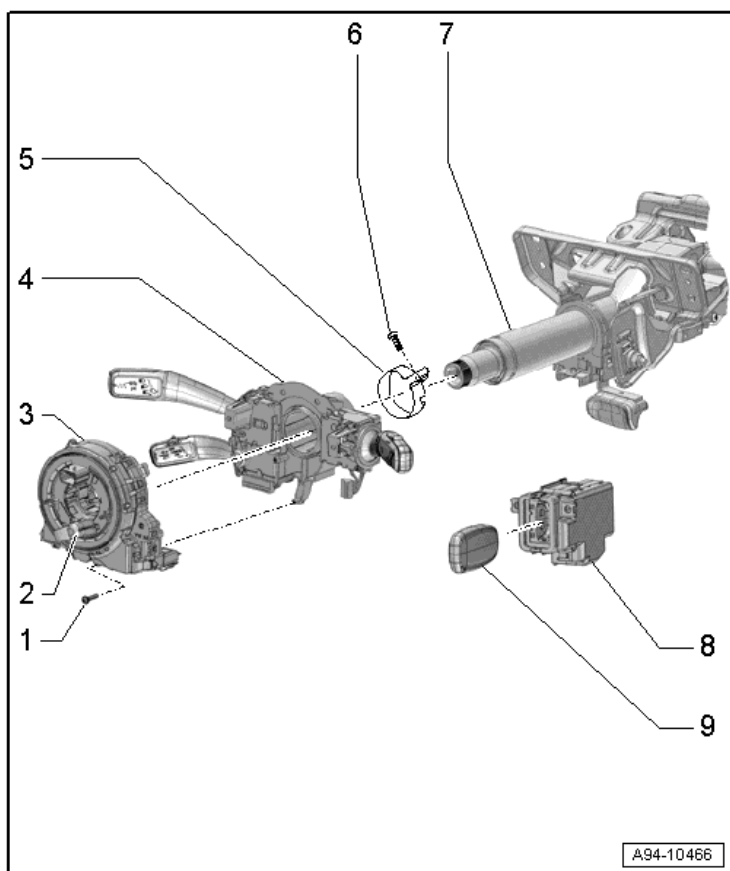
**5 - Left Rear Turn Signal Lamp -M6- and Right Rear Turn Signal Lamp -M8-**

**6 - Tail Lamp Housing**





## Steering Column Switch Overview



**1 - Clip Inside The Side Panel**

□ 0.5 Nm

**2 - Transport Protection**

**3 - Steering Column Electronic Systems Control Module -J527-**

**4 - Steering Column Switch Module**

**5 - Clamping Ring**

**6 - Clamping Screw**

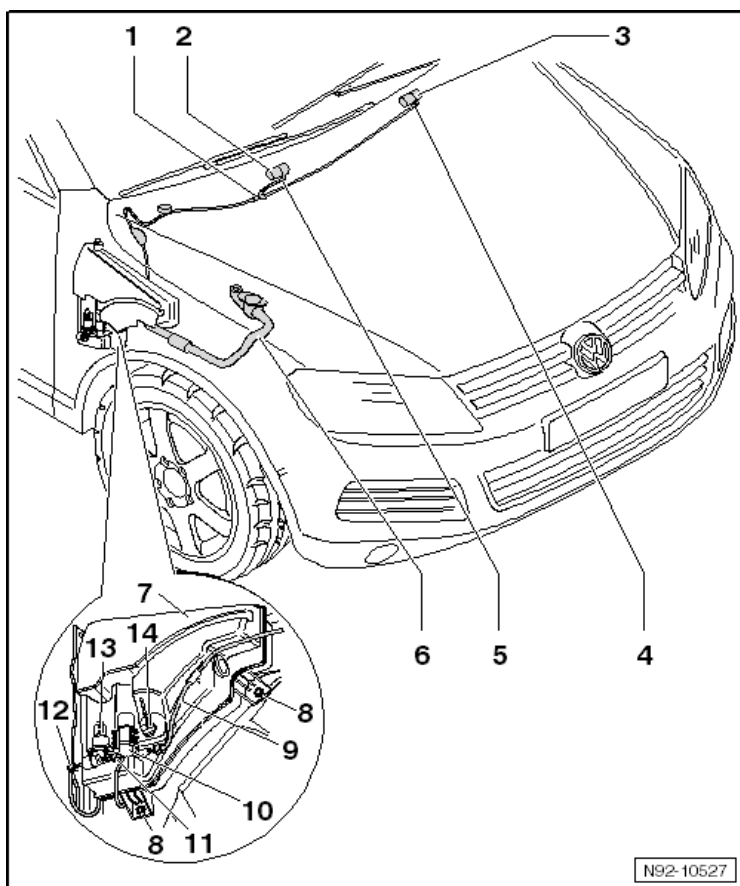
□ 4 Nm

**7 - Steering Column**

**8 - Access/Start Authorization Switch -E415-**

**9 - Ignition Key**

## Windshield Washer System Overview



- 1 - Y-Connection
- 2 - Right Washer Nozzle
- 3 - Left Washer Nozzle
- 4 - Angle Coupling
- 5 - Angle Coupling
- 6 - Windshield Washer System Reservoir Filler Tube
- 7 - Washer Fluid Reservoir
- 8 - Screws
  - 6 Nm
  - M6 x 16
- 9 - Hose With Angle Connector
- 10 - Headlamp Washer System Pump
- 11 - Angle Coupling
- 12 - Angle Coupling
- 13 - Windshield and Rear Window Washer Pump -V59-
- 14 - Windshield Washer Fluid Level Sensor -G33-

## Interior Lights, Switches Tightening Specifications

Component	Nm
Alarm horn bracket	4
Front interior lamp	2
Horn bracket	20
Power steering column switch	1.5

## Wiring Tightening Specifications

Component	Nm
Comfort system central control module bracket	3.5
Connection/conjunction box 2	2.5
Connection/conjunction box 3	8
Relay and fuse carrier 2	10

## Electric Drive Tightening Specifications

Component	Nm
Auxiliary hydraulic pump control module bracket to wheel housing bolt	9
B+ wire to remote jump start terminal nut	20
B+ wire to threaded connection nut	20
Bracket to hybrid battery unit bolt	23
Connection box cover to electro-drive drive motor bolt	7
Drive motor high voltage wiring harness to electro-drive drive motor bolt	8
Drive motor high voltage wiring harness to electro-drive drive motor nut	20
Electric drive power and control electronics to bracket nut	10
Electric drive power and control electronics cover panel bolt/nut	9
Fan to hybrid battery unit bolt	10
Ground cable to electric drive power and control electronics nut	20
High voltage wiring harness protector to frame bolt/nut	4
Potential equalization cable - hybrid battery unit to body	9
Potential equalization cable - electric drive power and control electronics to body	9
Potential equalization cable - electro-drive drive motor to body	20
Ventilation guide to hybrid battery unit bolt	10