

2014 VW Jetta & GLI

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

N·m-to-lb·ft (ft·lb)

To calculate: N·m x 0.738 = lb·ft

N·m	lb·ft (ft·lb)		N·m	lb·ft (ft·lb)		N·m	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

N·m-to-lb·in (in·lb), kg·cm

To calculate: $N \cdot m \times 8.85 = lb \cdot in$ • $N \cdot m \times 10.20 = kg \cdot cm$

N·m	lb·in (in·lb)	kg·cm	N·m	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: $N \cdot cm \times 0.089 = lb \cdot in$ • $N \cdot cm \times 0.102 = kg \cdot cm$

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

kg·cm-to-lb·in (in·lb), N·cm

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

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

Warnings and Cautions

WARNINGS

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

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

(WARNINGS cont'd on next page)

WARNINGS *(cont'd)*

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

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

CAUTIONS

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

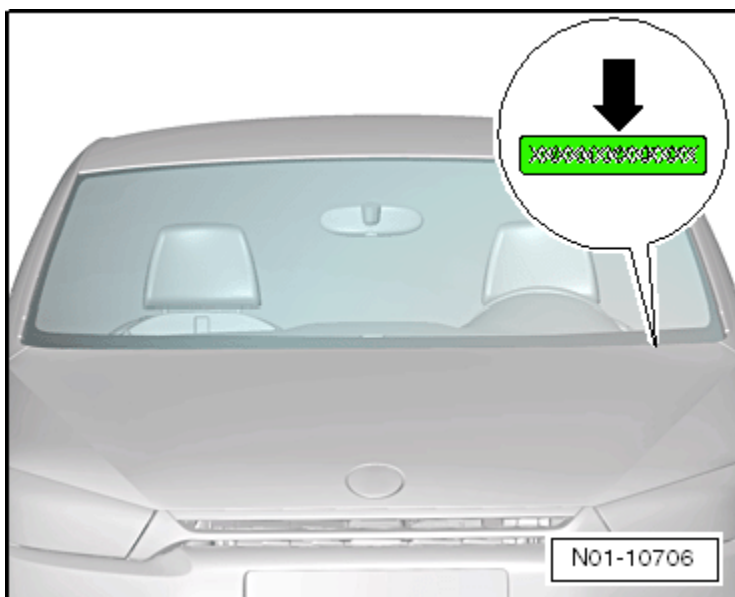
(CAUTIONS cont'd on next page)

CAUTIONS *(cont'd)*

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

VEHICLE IDENTIFICATION

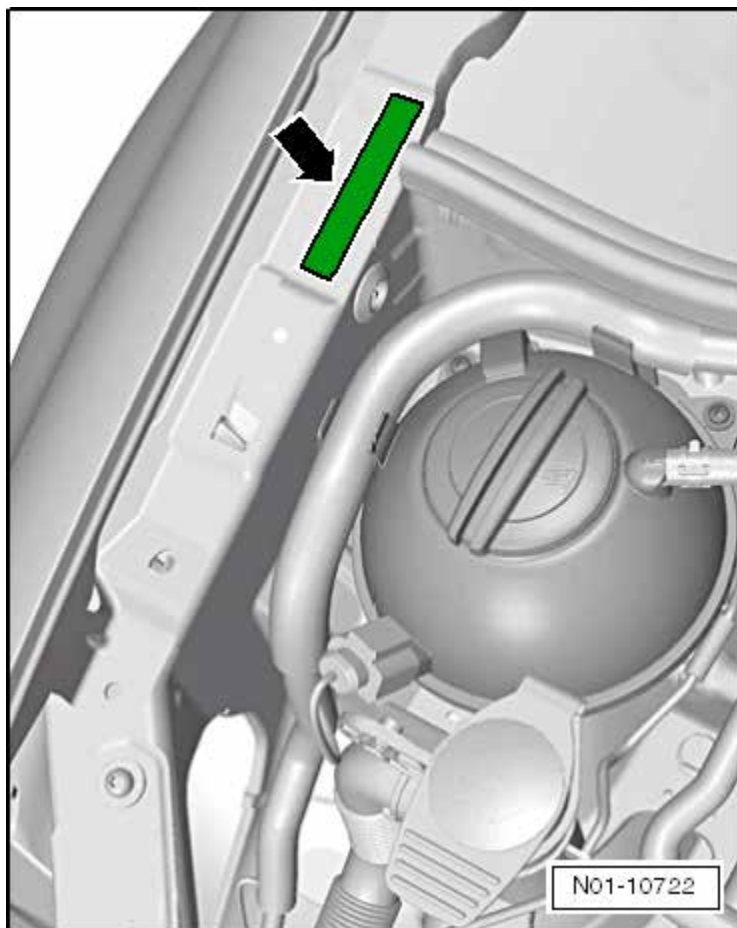
VIN on Lower Edge of Windshield



Vehicle
Identification

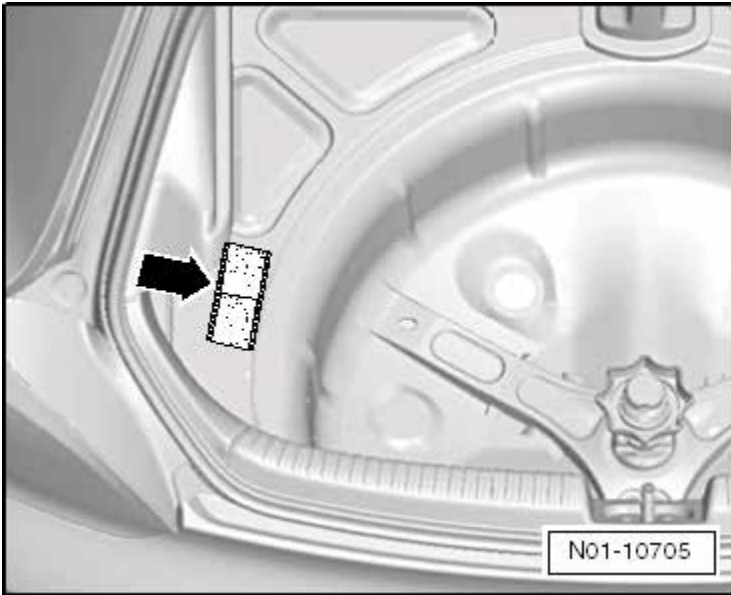
The VIN ➡ is on the left side of the vehicle in the area of the windshield wiper mount. It is visible from outside.

VIN on Longitudinal Member Extension



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

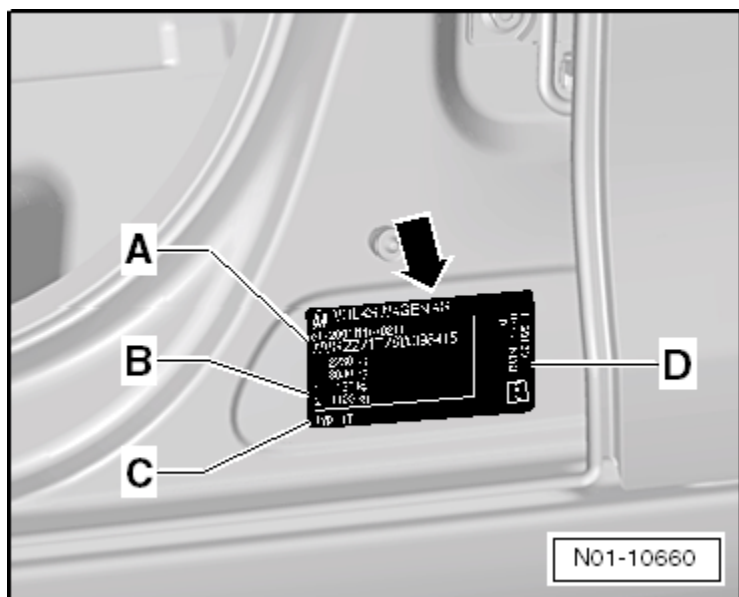
Vehicle Data Label



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

Vehicle
Identification

Type Plate



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

The type plate contains the following vehicle information:

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

VIN Decoder

Series:

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

B* CC Sport/Sport+ w/Auto Trans, Eos KomfortSport w/Auto Trans, Jetta SE w/5 Spd Man, Passat SE, Tiguan w/Auto Trans and 4Motion

C* Golf 4dr w/5 Spd Manual, Passat SEL, Tiguan w/Man Trans

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

E* Tourareg V6 S/PTDI Hybrid

F* Beetle w/5 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/5 Spd Man Trans

H* Beetle 1.8T w/5 Spd Man Trans, CC V6 Exec w/Auto Trans, Beetle 2.5L w/5 Spd Manual, GTI 4dr w/Auto Trans

J* Beetle 1.8T w/5 Spd Auto Trans, Beetle 2.5L TDI w/5 Spd Auto Trans

K* Jetta SportWagen w/5 Spd Man Trans

L* Jetta SEL/TDI w/Auto Trans

M* Jetta SportWagen w/5 Spd Manual

N* Golf 4dr w/5 Spd Manual

R* Beetle TDI w/5 Spd Man, CC Exec w/Auto Trans

V* Beetle R-Line w/5 Spd Auto Trans

1* Jetta / S w/5 Spd Manual

2* Jetta / S w/Auto Trans

4* Beetle R-Line w/5 Spd Manual, Jetta GLI w/Auto Trans

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

6* Beetle Conv. TDI w/5Spd Man Trans, Jetta Hybrid w/Auto Trans

7* Beetle Conv. R-Line w/5 Spd Auto Trans

8* Beetle Conv. R-Line w/5 Spd Man Trans

2014 Volkswagen VIN Decoder (except Routan)

E = 2014

Sequential production number (position 12 - 17)

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

WWV = Europe - Pass. Car

1WV = USA - Pass. Car

3WV = Mexico - Pass. Car

WVG = Europe - S.U.V.

See back

Calculate per NHTSA Code

2014

A3*** = Passat

AH (1F) = Eos

AJ (16R1K)*** = Golf GTI, Jetta, Jetta SportWagen

AN (3C) = CC

AX (8N) = Beetle, Beetle Conv.

BP (9P) = Tiguan

C = Chattanooga

D = Bratislava

E = Emden

M = Mexico

P = Mosel

V = Portugal

W = Wolfsburg

C = Chattanooga

D = Bratislava

E = Emden

M = Mexico

P = Mosel

V = Portugal

W = Wolfsburg

A* 5 cyl 2.5L 170hp (CBTA-M) Golf

B* 5 cyl 2.5L 170hp (CBTA-M-PZEV*) Golf

D* 4 cyl 2.0L 200hp (CBFA-PZEV*) GTI

F* VR6 3.6L 280hp (CGRA) Tourareg

G* 6 cyl 3.0L 333hp + 34 Kw (CGFA) Tourareg Hybrid

H* 5 cyl 2.5L 170hp (CBTA-M) Passat

K* 4 cyl 2.0L 115hp (CBPA) Jetta

L* 4 cyl 2.0L TDI 140hp (CJAA) Beetle, Beetle Convertible, Jetta, Jetta SportWagen

M* VR6 3.6L 280hp (CDVB) Passat

N* 4 cyl 2.0L 200hp (CCTA) CC

N* 4 cyl 2.0L TDI 140hp (CKRA) Passat

P* 4 cyl 2.0L 200hp (CBFA-PZEV*) CC

P* 5 cyl 2.5L 170hp (CBTA-M-PZEV*) Beetle, Beetle Convertible, Jetta, Jetta SportWagen, Passat

P* VR6 3.6L 280hp (CNNA) CC

P* VR6 3.0L TDI 240hp (CNRB) Tourareg

S* 4 cyl 1.8L 170hp (CPKA) Passat

S* 4 cyl 2.0L 210hp (CJAA) Beetle, Beetle Convertible, Jetta GLI

T* 4 cyl 1.8L 170hp (CPRA-PZEV*) Passat

T* 4 cyl 2.0L 210hp (CPRA-PZEV*) Beetle, Beetle Convertible, Jetta GLI

V* VR6 3.6L 280hp (CNNA) CC

V* 4 cyl 2.0L 200hp (CCTA) Tiguan

W* 4 cyl 2.0L 200hp (CBFA-SULEV II*) Eos

X* 5 cyl 2.5L 170hp (CBTA-M) Beetle, Beetle Convertible, Jetta, Jetta SportWagen

0* 4 cyl 1.8L 170hp (CPKA) Beetle, Beetle Convertible, Jetta

1* 4 cyl 1.8L 170hp (CPRA-PZEV*) Beetle, Beetle Convertible, Jetta

3* 4 cyl 1.4L 150hp + 28 Kw (CNLA-PZEV*) Jetta Hybrid

Vehicle Identification

October 30, 2013 (Rev 4)

* 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 3WV. GTI and Golf models are identified by WMI code of WWV.

2014 Restraint System:

All = Active-Dr/Pass - Front Air Bag - Dr/Pass

1 (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 (Tourareg) = Advanced Front Air Bags + Side Impact Air Bags - Front

+ Side Curtain Air Bags

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)

VW Jetta & GLI Quick Reference Specification Book • February 2014

13

SALES CODES

Engine Codes

CPKA/CPRA	1.8L 4-cylinder 4V
CPLA/CPPA	2.0L 4-cylinder 4V
CBFA/CCTA	2.0L 4-cylinder 4V
CJAA	2.0L TDI 4-cylinder 4V turbo
CBTA/CBUA	2.5L 5-cylinder 4V

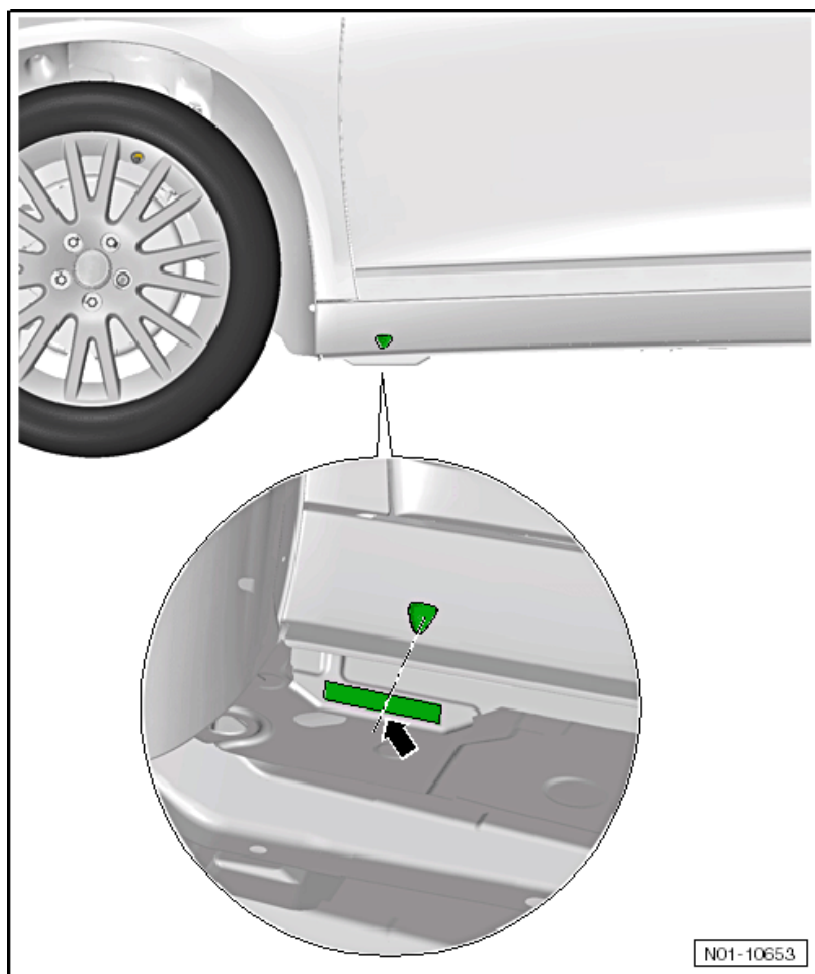
Transmission Codes

0A4	5-speed manual
02Q	6-speed manual
02E	6-speed direct shift
09G	6-speed automatic

VEHICLE LIFTING

Hoist and Jack Mounting Points

Front

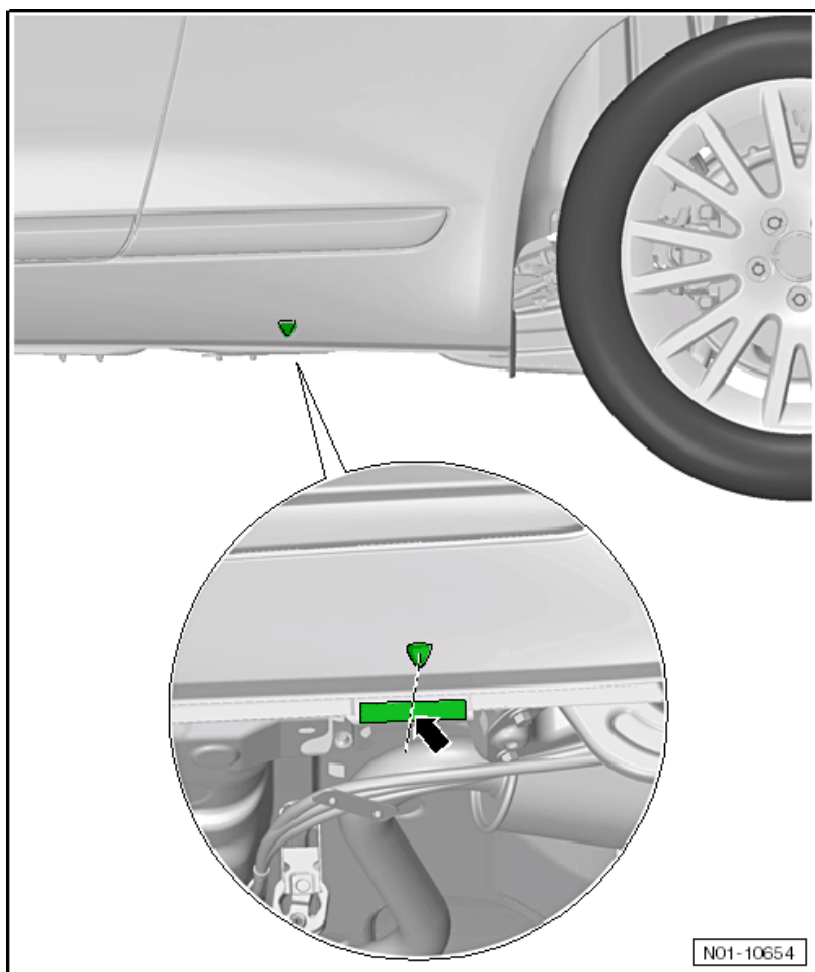


Position the support plate in the side member vertical reinforcement area ➡.

Sales
Codes

Vehicle
Lifting

Rear

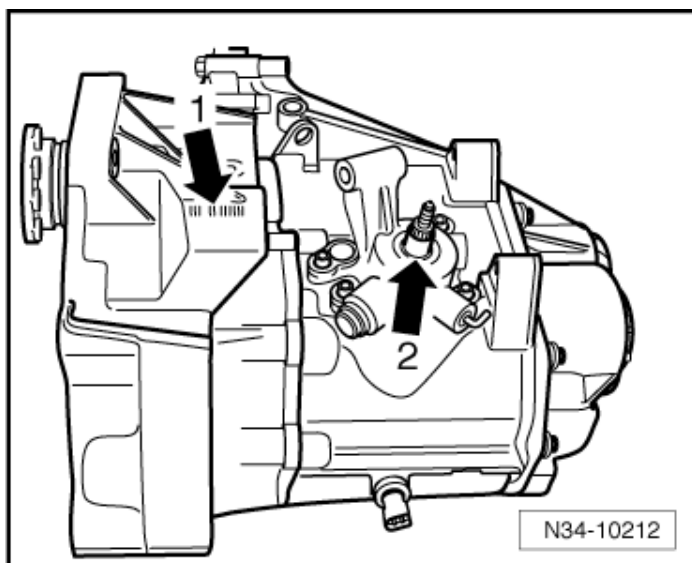


Position the support plate in the side member vertical reinforcement area ➡.

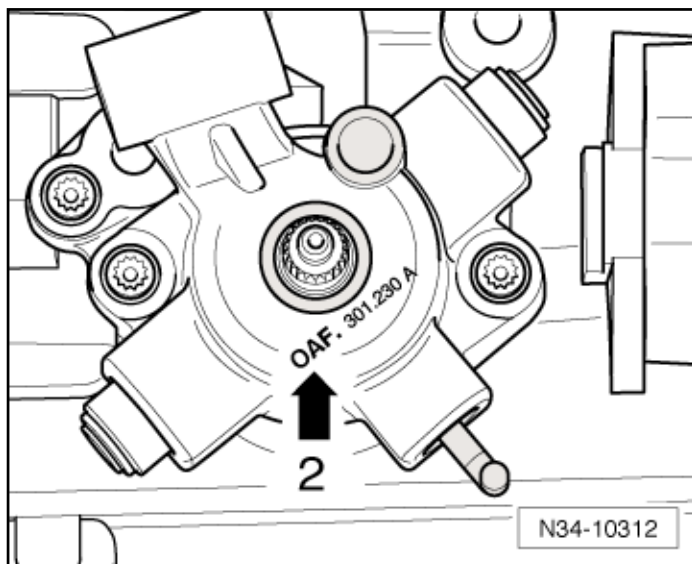
MANUAL TRANSMISSION – 0AF

General Information

Transmission Identification



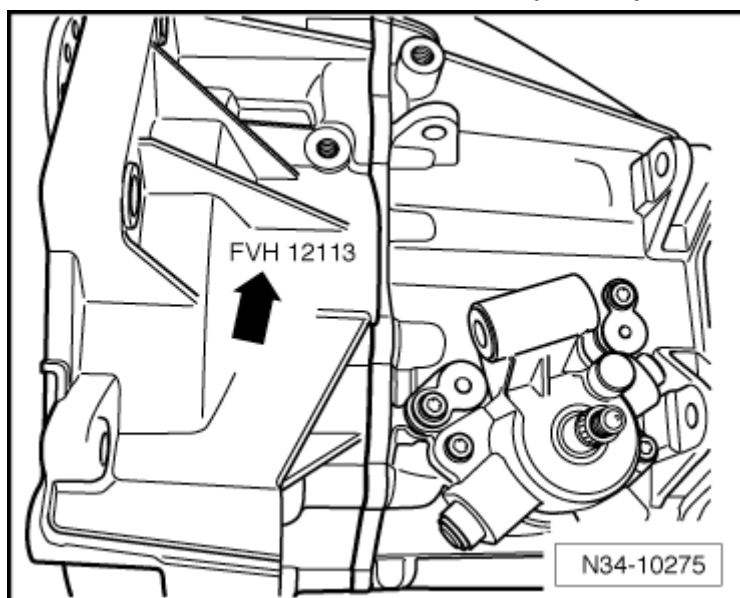
Code letters and date of manufacture (1 ➡).
Manual transmission 0AF (2 ➡).



Manual transmission 0AF (2 ➡).

Manual Trans. –
0AF

Transmission Identification (cont'd)



Transmission code letters and build date.

Example:	FVH	12	11	3
	Identification code	Day	Month	Year (2003) of manufacture

The transmission code letters are also included on the vehicle data label.

Codes Letters, Transmission Allocation and Capacities

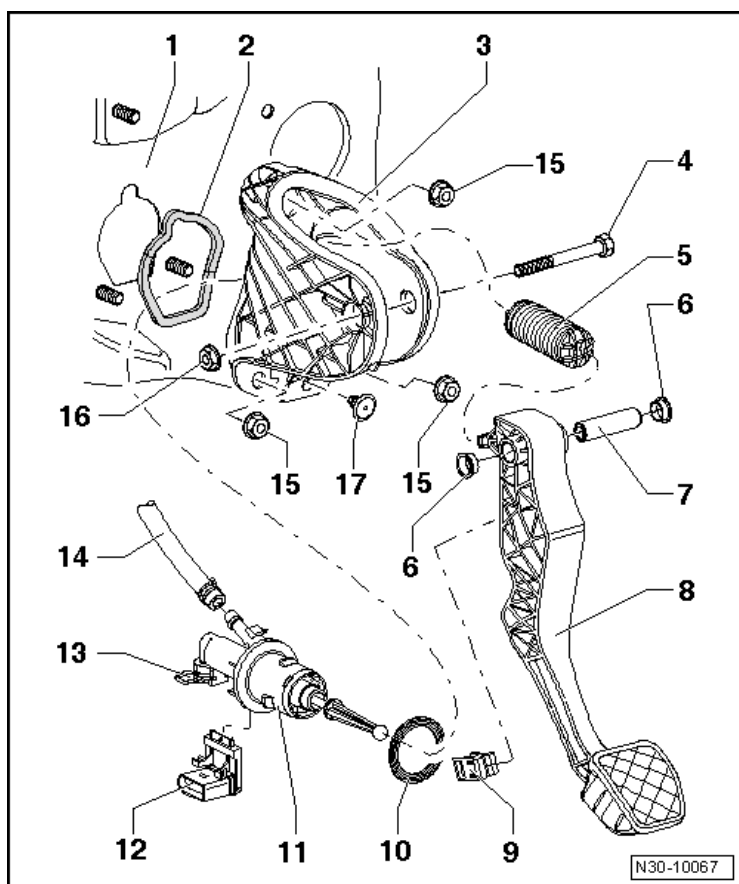
Transmission		5 Speed Manual Transmission 0AF
Code Letters		LDZ
Manufactured	from through	06.10
Allocation	Type	Jetta from MY 2011
	Engine	2.0L - 85 kW
Ratio $Z_1 : Z_2$	Final drive	59: 15 = 3.933
Capacities for the manual transmission		2.0 liters
Drive axle flange diameter		100 mm

Refer to the Parts Catalog for the following information:

- Individual gear ratios
- Transmission fluid specifications
- Clutch disc and pressure plate allocation

Clutch – 0AF

Pedal Cluster Overview



- 1 - Bulkhead**
- 2 - Gasket**
 - ☐ Replace after removing
- 3 - Bracket**
- 4 - Bolt**
- 5 - Over-Center Spring**
- 6 - Bearing Bushing**
- 7 - Mounting Pin**
- 8 - Clutch Pedal**
- 9 - Base Plate**
- 10 - Gasket**
 - ☐ Replace after removing
- 11 - Clutch Master Cylinder**
- 12 - Clutch Position Sensor -G476-**
- 13 - Clamp**

Pedal Cluster Overview (*cont'd*)

14 - Supply Hose

15 - Hexagon Nut

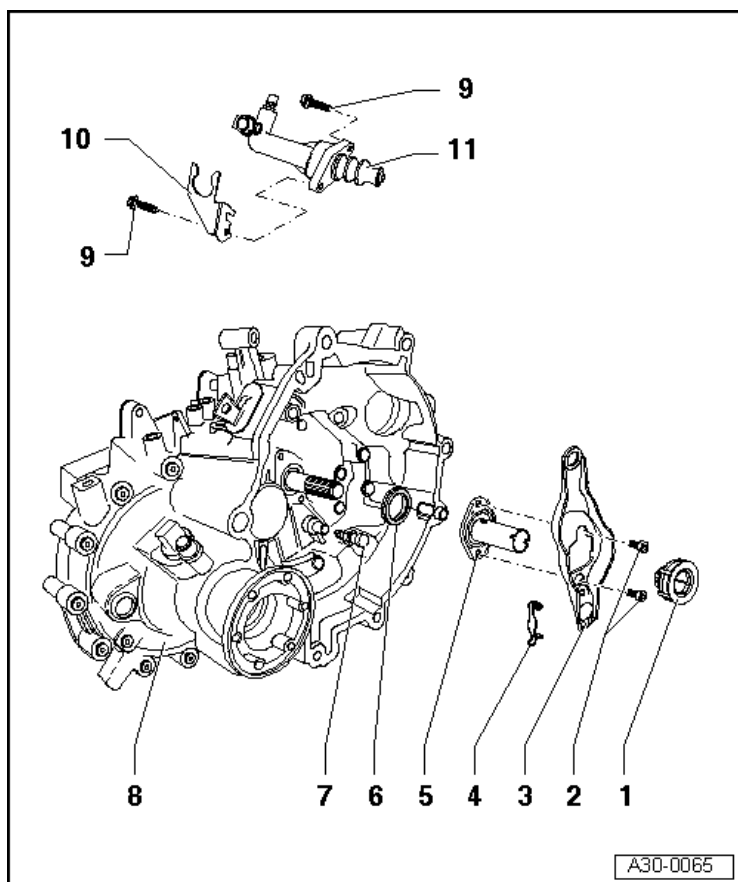
- ☐ 25 Nm
- ☐ Replace after removing

16 - Hexagon Nut

- ☐ 25 Nm
- ☐ Replace after removing

17 - Stop

Clutch Release Mechanism Overview



1 - Release Bearing

2 - Bolt

- ☐ 5 Nm + 90° turn
- ☐ Replace after removing

3 - Clutch Release Lever

4 - Spring

5 - Guide Sleeve

6 - Input Shaft Seal

7 - Ball Stud

- ☐ 20 Nm

8 - Transmission

9 - Hex Bolt

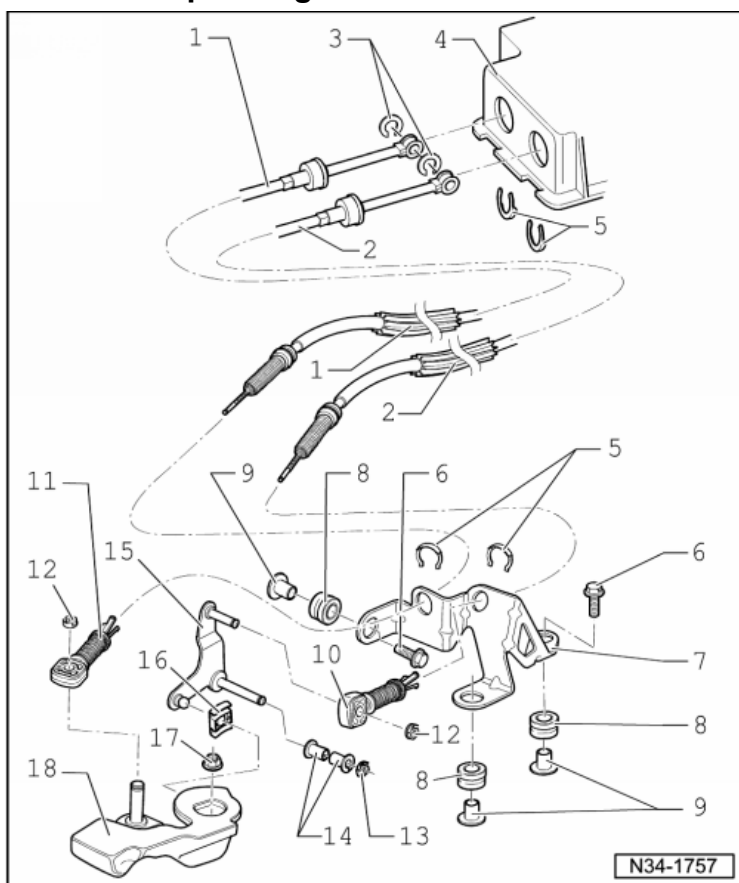
- ☐ 20 Nm

10 - Bracket

11 - Clutch Slave Cylinder

Controls, Housing – 0AF

Operating Cables Overview



1 - Gearshift Cable

2 - Selector Cable

3 - Lock Washer

☐ Replace after removing

4 - Selector Housing

5 - Lock Washer

☐ Replace after removing

6 - Hexagon Nut

☐ 20 Nm

7 - Cable Mounting Bracket

8 - Grommet

9 - Spacer

10 - Cable Retainer

11 - Cable Retainer

12 - Lock Washer

- ☐ Replace after removing

13 - Lock Washer

- ☐ Replace after removing

14 - Bearing Bushing

15 - Relay Lever

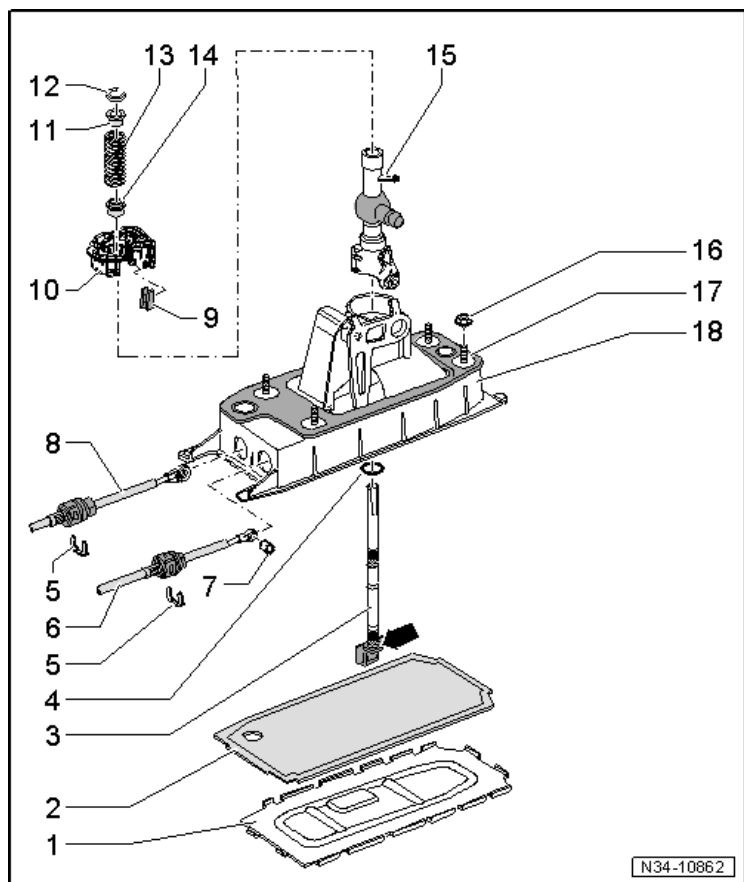
16 - Sliding Shoe

17 - Hexagon Nut

- ☐ 23 Nm
- ☐ Replace after removing

18 - Selector Lever

Gearshift Lever and Gearshift Housing Overview



- 1 - Base Plate**
☐ Replace after removing
- 2 - Gasket**
☐ Replace after removing
- 3 - Selector Lever**
- 4 - Washer**
- 5 - Lock Washer**
- 6 - Selector Cable**
- 7 - Bushing**
- 8 - Gearshift Cable**
- 9 - Insulation**
- 10 - Bearing Shell**
☐ Replace after removing
- 11 - Bushing**
- 12 - Lock Washer**

13 - Pressure Spring

14 - Bushing

15 - Gearshift Lever Guide

16 - Nut

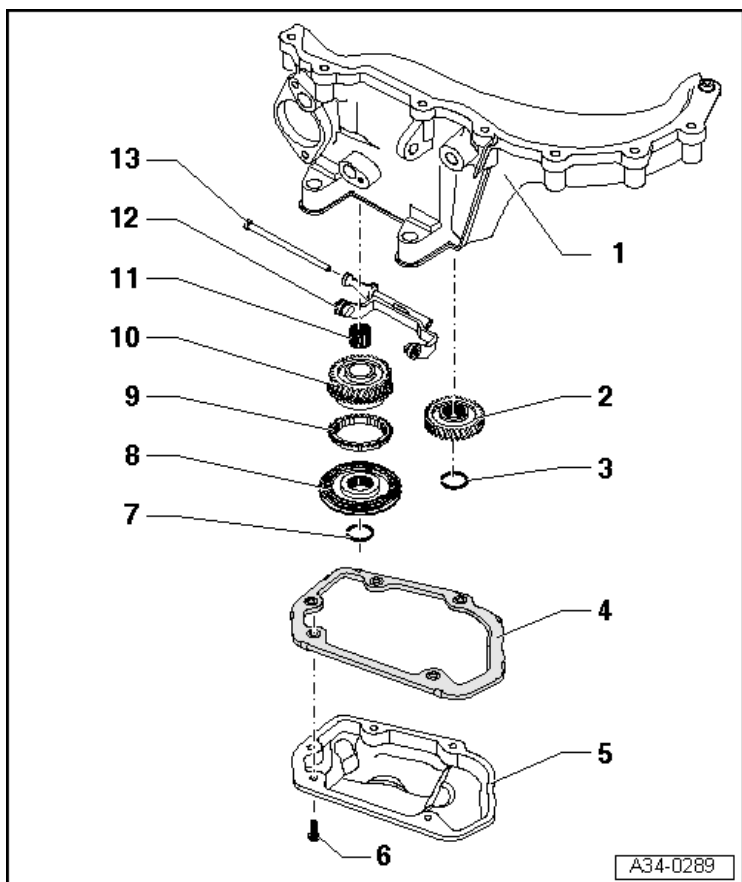
☐ M8: 25 Nm

☐ M6: 8 Nm

17 - Gasket

18 - Selector Housing

Transmission Housing Cover and 5th Gear Overview



1 - Transmission Housing

2 - 5th Gear Wheel

3 - Locking Ring

☐ Replace after removing

4 - Gasket

5 - Transmission Housing Cover

6 - Bolt

☐ 5 Nm + 90° turn

☐ Replace after removing

7 - Locking Ring

☐ Replace after removing

8 - Synchronizer Hub with Locking Collar and Stop Ring for 5th Gear

9 - Synchronizer Ring for 5th Gear

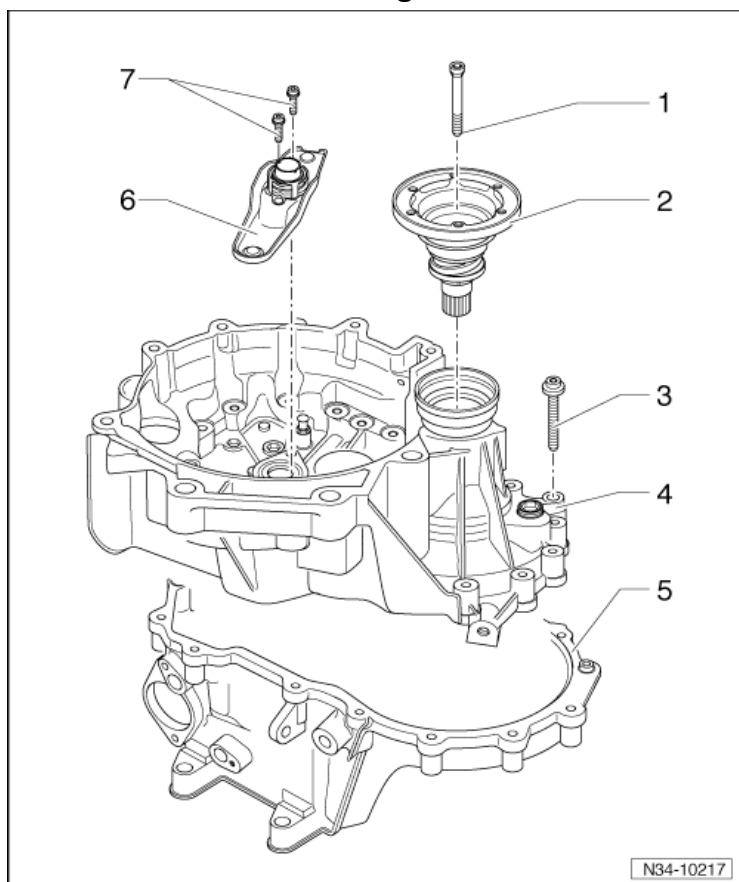
10 - 5th Gear Wheel

11 - Needle Bearing

12 - 5th Gear Shift Fork

13 - Mounting Pin

Clutch Housing Overview



1 - Bolt

- ☐ 25 Nm

2 - Flange Shaft with Pressure Spring

3 - Bolt

- ☐ 5 Nm + 90° turn
- ☐ Replace after removing

4 - Clutch Housing

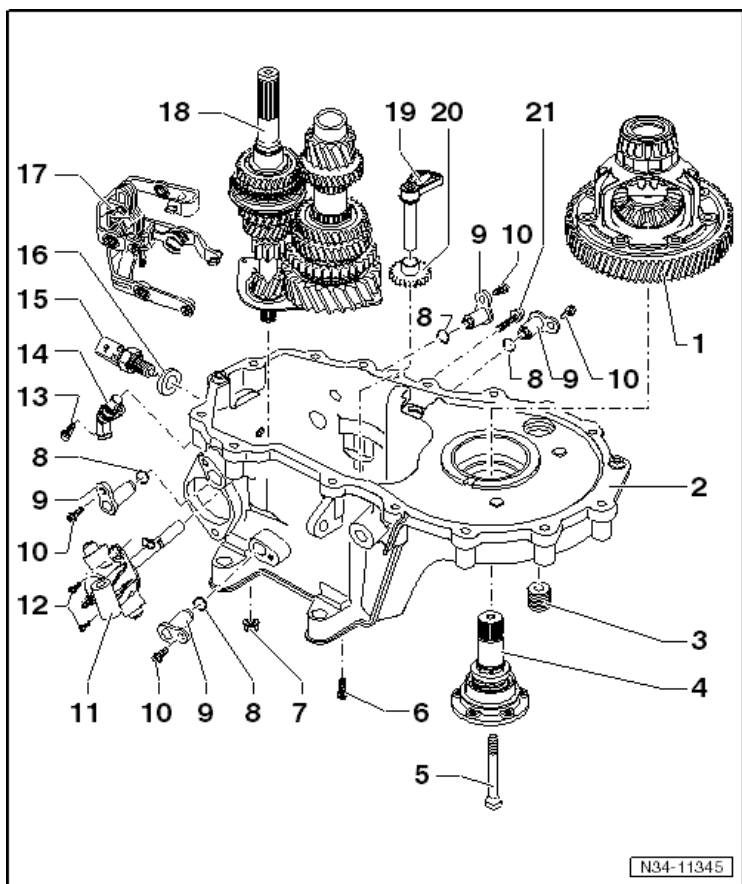
5 - Transmission Housing

6 - Clutch Release Lever

7 - Bolt

- ☐ 5 Nm + 90° turn
- ☐ Replace after removing

Input Shaft, Output Shaft, Differential Selector Mechanism and Shift Rods Overview



1 - Differential

2 - Transmission Housing

3 - Drain Plug

- ☐ Oil filler or drain plug with multi-point socket head, 25 Nm
- ☐ Oil filler or drain plug with hex socket head, 30 Nm

4 - Flange Shaft with Pressure Spring

5 - Bolt

- ☐ 25 Nm

6 - Bolt

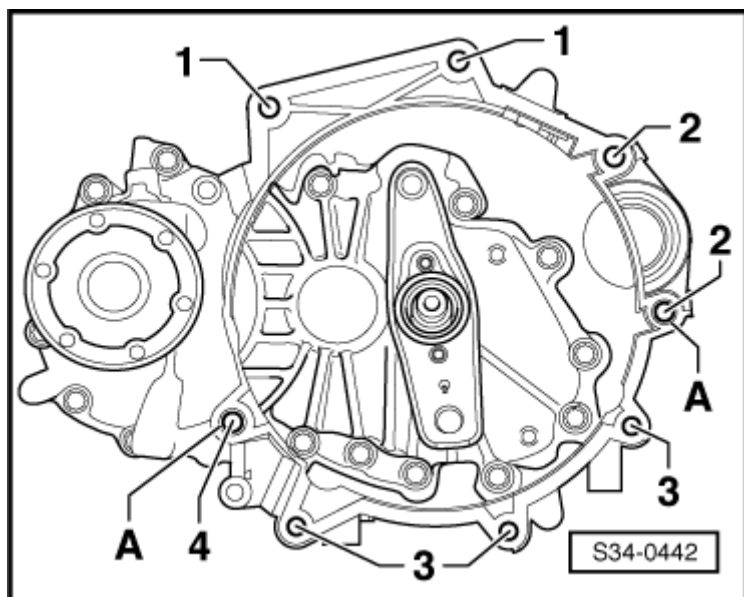
- ☐ 5 Nm + 90° turn
- ☐ Replace after removing

7 - Hex Collar Bolt

- ☐ 23 Nm
- ☐ Replace after removing

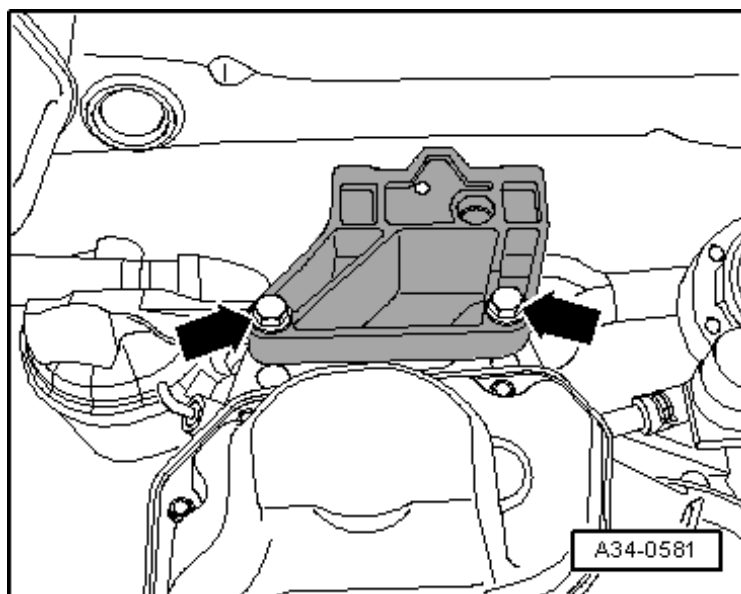
- 8 - O-ring**
 - ☐ Replace after removing
- 9 - Pivot Pin**
- 10 - Bolt**
 - ☐ 5 Nm + 90° turn
 - ☐ Replace after removing
- 11 - Gearshift Shaft with Gearshift Cover**
- 12 - Bolt**
 - ☐ 5 Nm + 90° turn
 - ☐ Replace after removing
- 13 - Bolt**
 - ☐ 6 Nm
- 14 - Transmission Neutral Position Sensor -G701-**
- 15 - Back-up Lamp Switch -F4-**
 - ☐ 20 Nm
- 16 - Seal**
 - ☐ If present, replace after removing
 - ☐ Not installed on all transmissions
- 17 - Selector Mechanism**
- 18 - Input Shaft with Output Shaft and Bearing Mount/Grooved Ball Bearing**
- 19 - Reverse Gear Axle**
- 20 - Reverse Drive Gear**
- 21 - Bolt**
 - ☐ 25 Nm + 45° turn
 - ☐ Replace after removing

Transmission to Engine Tightening Specifications



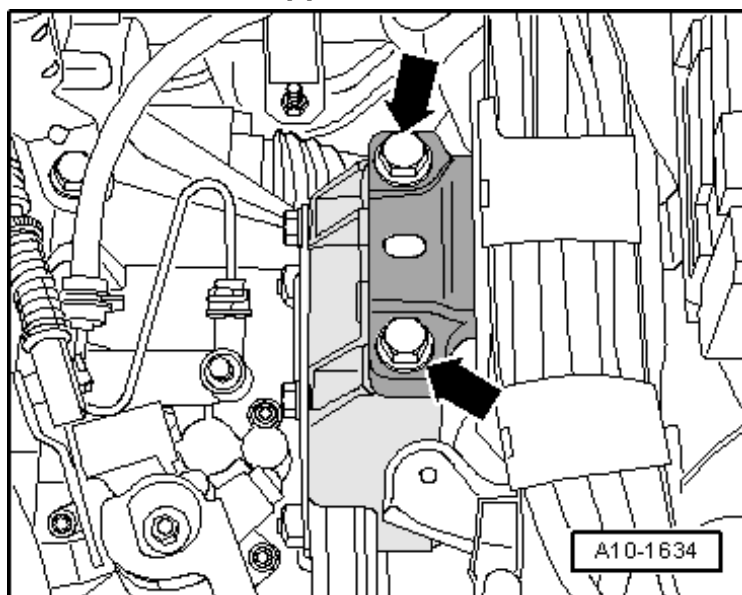
Item	Bolt	Qty.	Nm
1	M12 x 50	2	80
2	M12 x 135 (also starter to transmission)	2	80
3	M10 x 50	3	40
4	M12 x 60	1	80
A	Alignment bushings for centering		

Transmission Support to Transmission



Replace the bolts. Bolts -arrows- 40 Nm + 90° turn.

Transmission Support to Transmission Mount



Step	Bolt
1	Replace bolts.
2	Tighten all bolts hand-tight
3	60 Nm + 90° turn

Rear Final Drive, Differential – 0AF

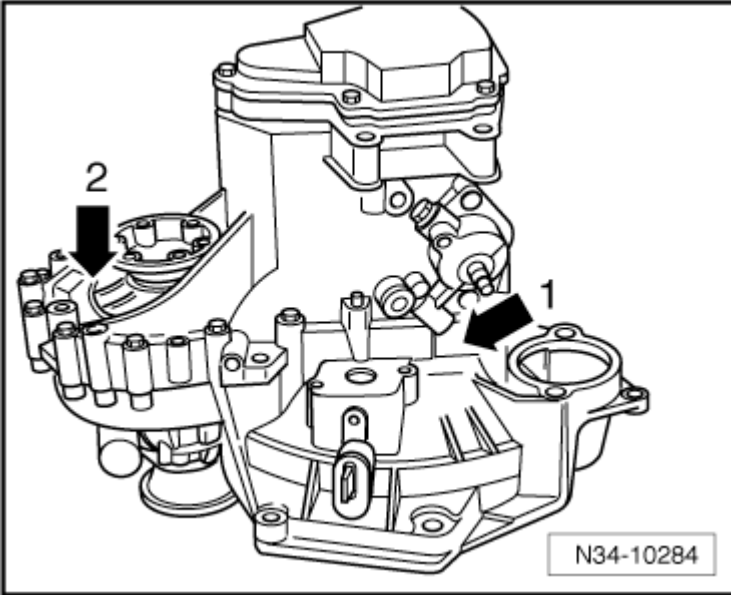
Fastener Tightening Specifications

Component	Fastener Size	Nm
Flange shaft bolt	-	25

MANUAL TRANSMISSION – 0A4

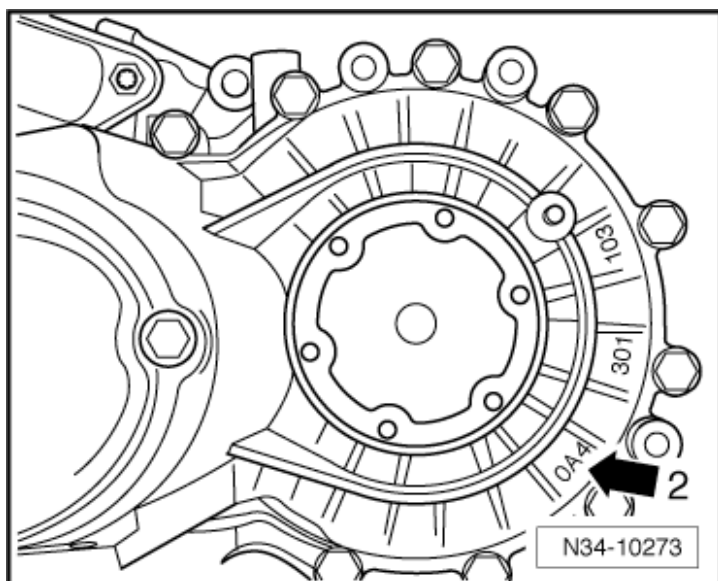
General Information

Transmission Identification

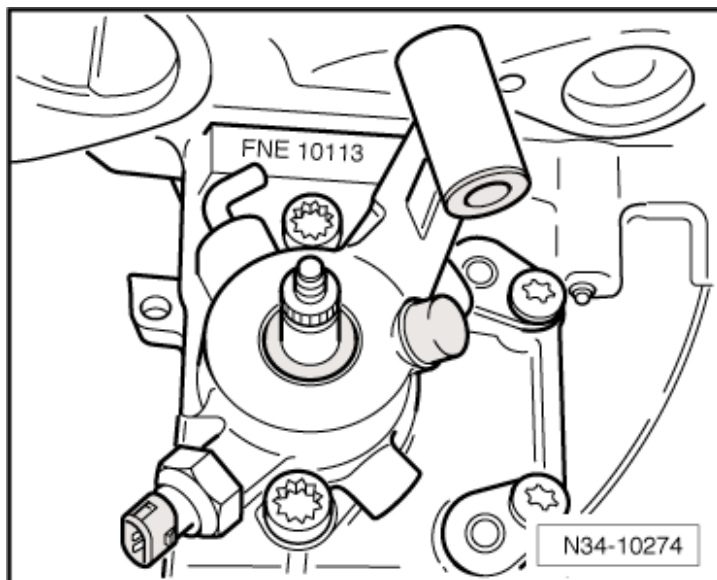


Code letters and build date (1 ➡).

Manual transmission 0A4 (2 ➡).



Manual transmission 0A4 (2 ➡).



Transmission code letters and build date.

Example:	FNE	10	11	3
	Identification code	Day	Month	Year (2003) of manufacture

The transmission code letters are also included on the vehicle data label.

Codes Letters, Transmission Allocation and Capacities

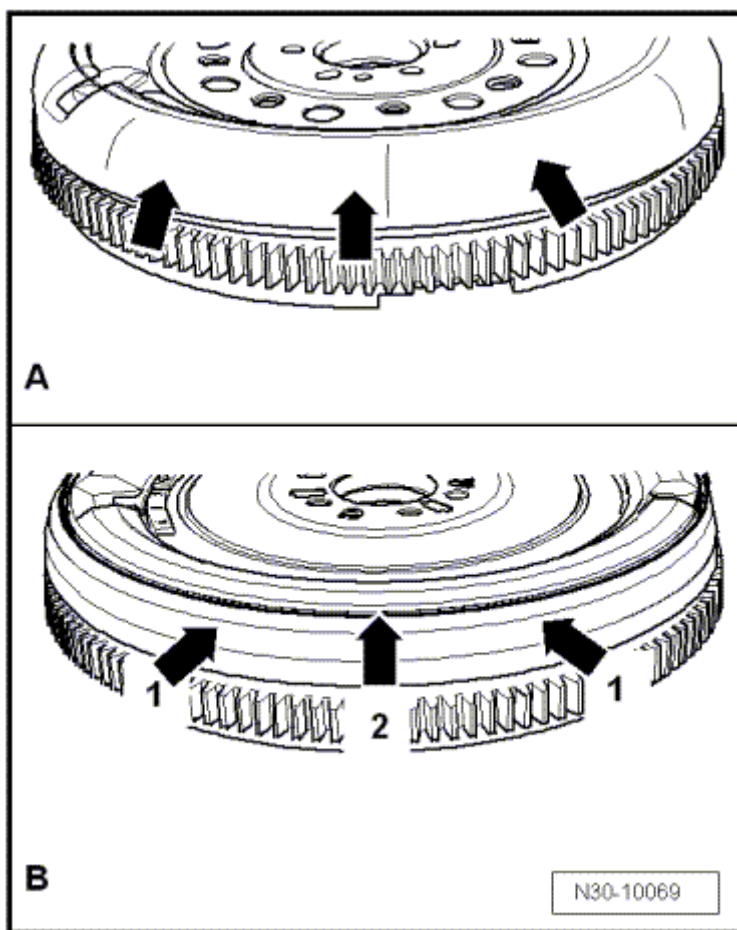
Transmission		5 Speed Manual Transmission 0A4
Code Letters		LEA
Manufactured	from through	05.10
Allocation	Engine	2.5L - 125 kW
Ratio $Z_1 : Z_2$	Final drive	61:18 = 3.778
Capacities for the manual transmission		Refer to the Fluid Capacity Tables Rep. Gr. 03
Drive axle flange diameter		100 mm

Refer to the Parts Catalog for the following information:

- Individual gear ratios
- Transmission fluid specifications
- Clutch disc and pressure plate allocation

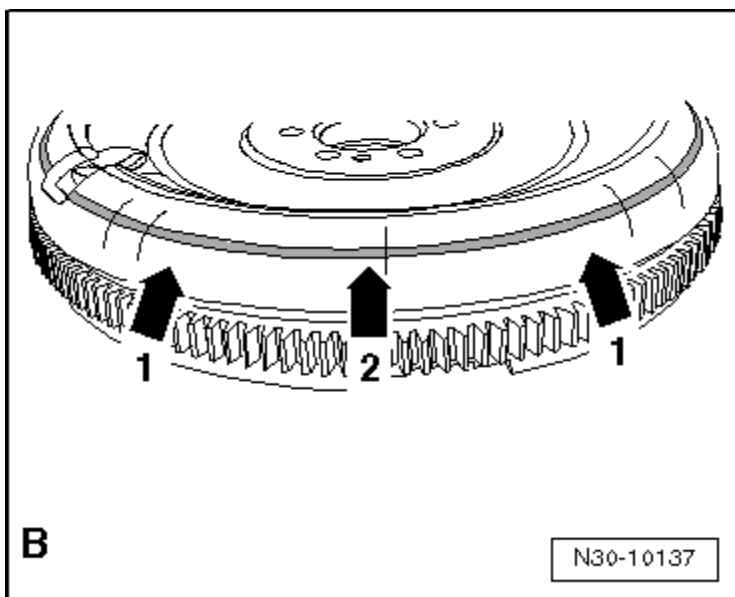
Clutch – 0A4

Determining Clutch Manufacturer



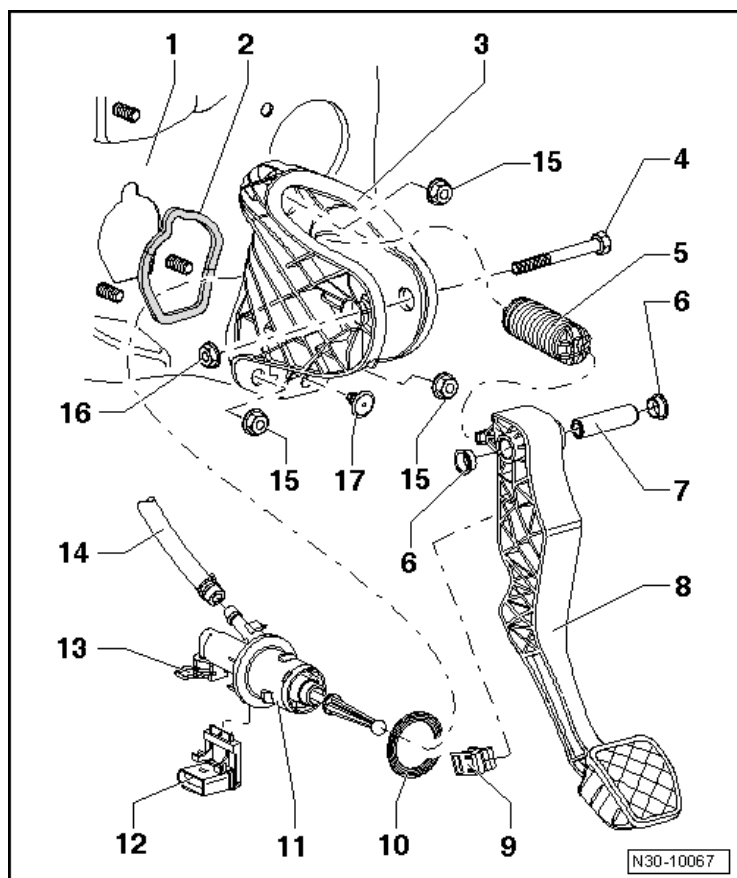
A) Round outer contour (➡) indicates a clutch manufactured by Sachs.

B) Squared outer contour (1 ➡) and a depression all the way around (2 ➡) indicates a clutch manufactured by LuK.



- B) Round outer contour (1 ➡) and a depression all the way around (2 ➡) indicates a clutch manufactured by LuK.

Clutch Pedal Overview



- 1 - Bulkhead**
- 2 - Gasket**
 - ☐ Replace after removing
- 3 - Bracket**
- 4 - Bolt**
- 5 - Over-Center Spring**
- 6 - Bearing Bushing**
- 7 - Mounting Pin**
- 8 - Clutch Pedal**
- 9 - Base Plate**
- 10 - Gasket**
 - ☐ Replace after removing
- 11 - Clutch Master Cylinder**
- 12 - Clutch Position Sensor -G476-**
- 13 - Clamp**
- 14 - Supply Hose**

15 - Hexagon Nut

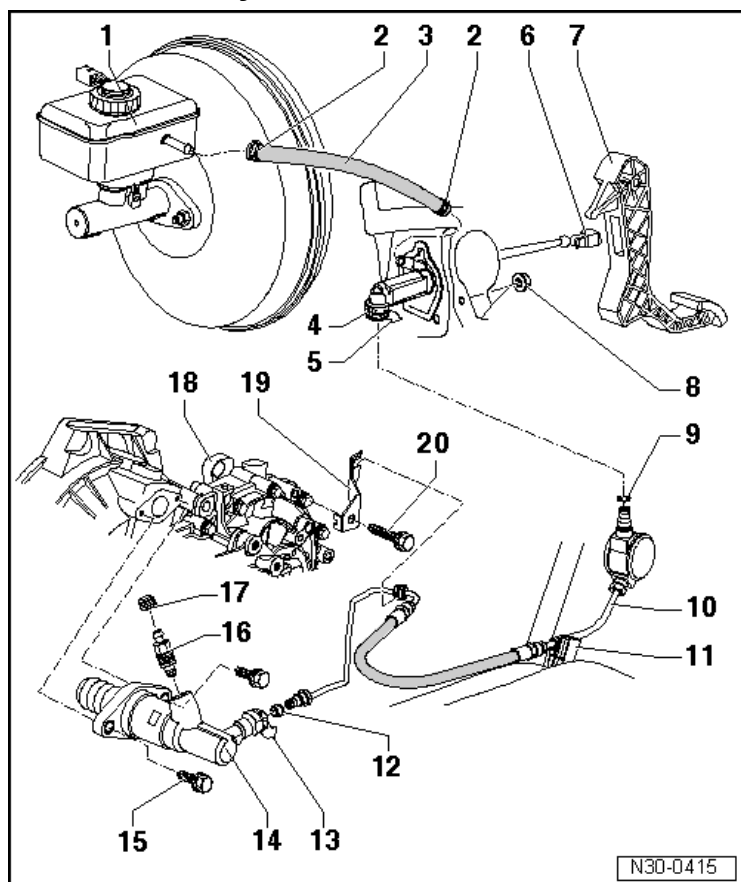
- ☐ 25 Nm
- ☐ Replace after removing

16 - Hexagon Nut

- ☐ 25 Nm
- ☐ Replace after removing

17 - Stop

Hydraulics Overview



- 1 - Brake Fluid Reservoir
- 2 - Spring Clamp
- 3 - Supply Hose
- 4 - Clutch Master Cylinder
- 5 - Clamp
- 6 - Mount
- 7 - Clutch Pedal
- 8 - Hexagon Nut
 - ☐ 25 Nm
 - ☐ Replace after removing
- 9 - Seal/O-Ring
- 10 - Hose/Line Assembly
- 11 - Bracket
- 12 - Seal/O-Ring
- 13 - Clamp
- 14 - Clutch Slave Cylinder

15 - Bolt

☐ 20 Nm

16 - Bleed Valve

17 - Dust Cap

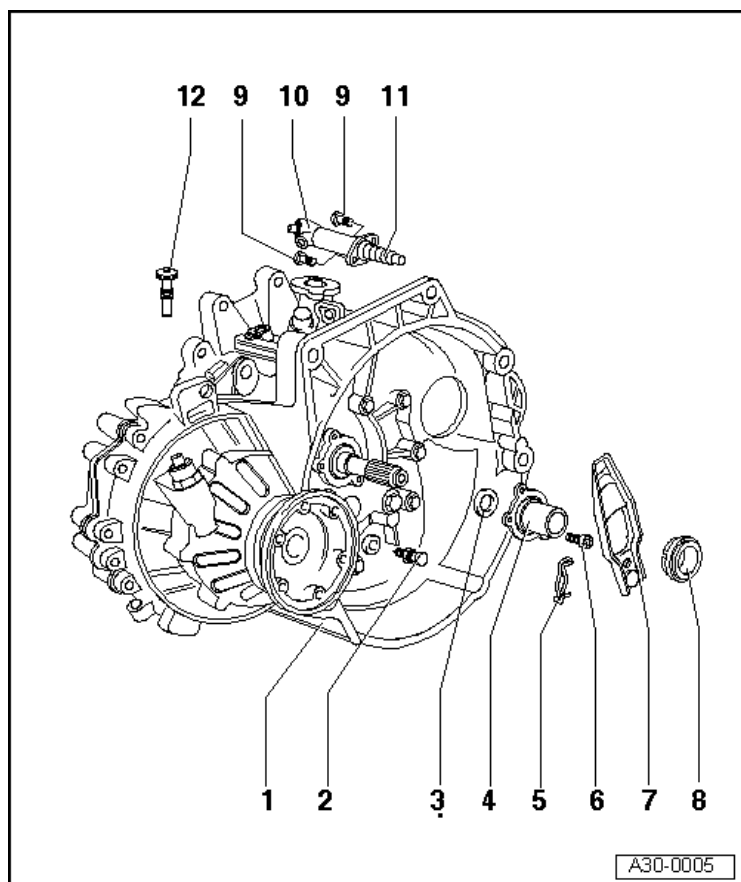
18 - Transmission

19 - Bracket

20 - Bolt

☐ 20 Nm

Clutch Release Mechanism Overview



1 - Transmission

2 - Ball Stud

☐ 25 Nm

3 - Input Shaft Seal

4 - Guide Sleeve

5 - Spring

6 - Cylinder Bolt

☐ 20 Nm

7 - Clutch Release Lever

8 - Release Bearing

9 - Collar Bolt

☐ 20 Nm

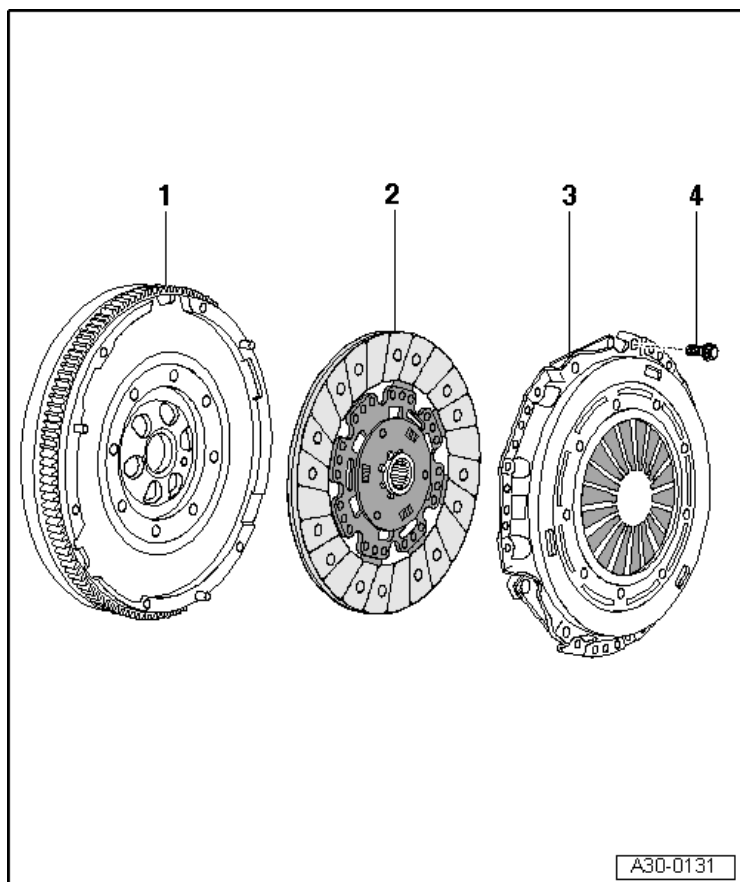
10 - Clutch Slave Cylinder

11 - Plunger

12 - Bolt

☐ Use an M6 x 35 bolt if the assembly bolt -12- is missing

Clutch Overview, Sachs



1 - Dual Mass Flywheel

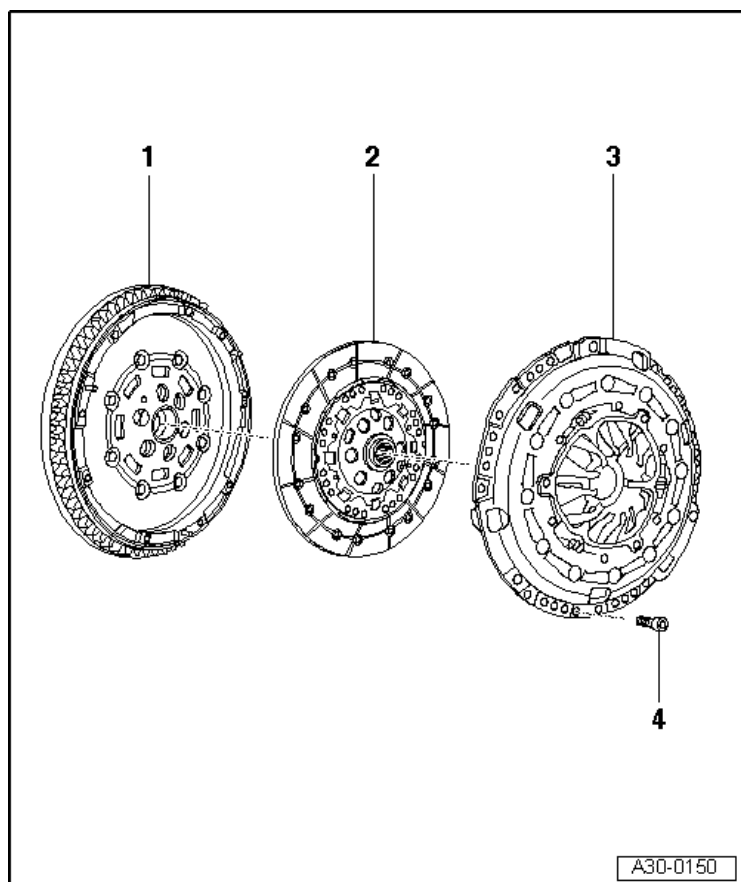
2 - Clutch Disc

3 - Pressure Plate

4 - Bolt

- ☐ M6 Bolt: 13 Nm
- ☐ M7 Bolt: 20 Nm
- ☐ Loosen and tighten in small steps and in diagonal sequence

Clutch Overview, Luk



1 - Dual Mass Flywheel

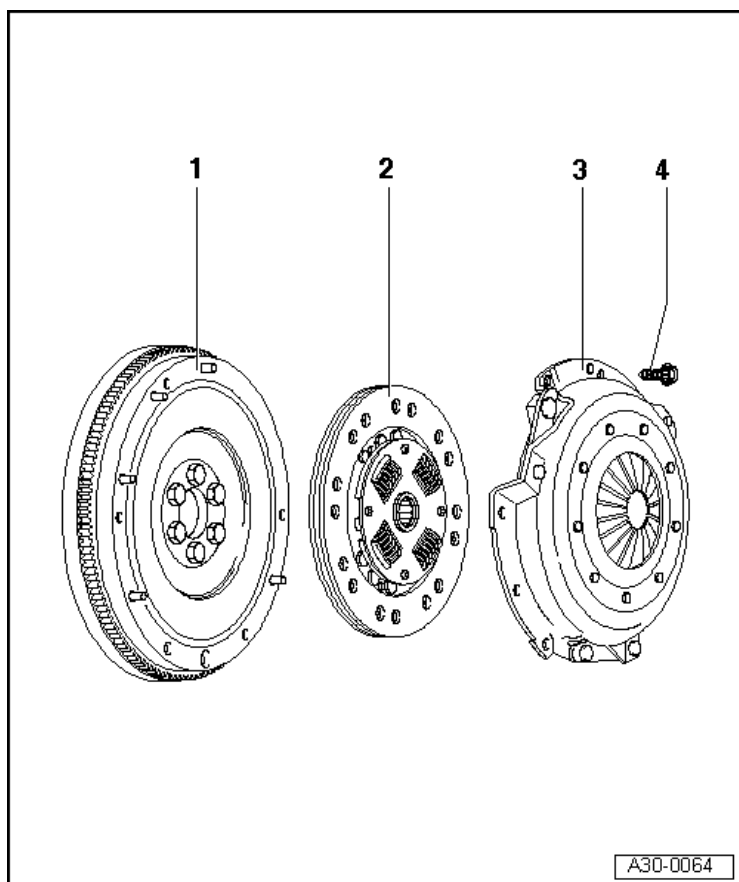
2 - Clutch Disc

3 - SAC Pressure Plate

4 - Bolt

- ☐ M6 Bolt: 13 Nm
- ☐ M7 Bolt: 20 Nm
- ☐ Loosen and tighten in small steps and in diagonal sequence

Clutch Overview, One-Piece



1 - Flywheel

2 - Clutch Disc

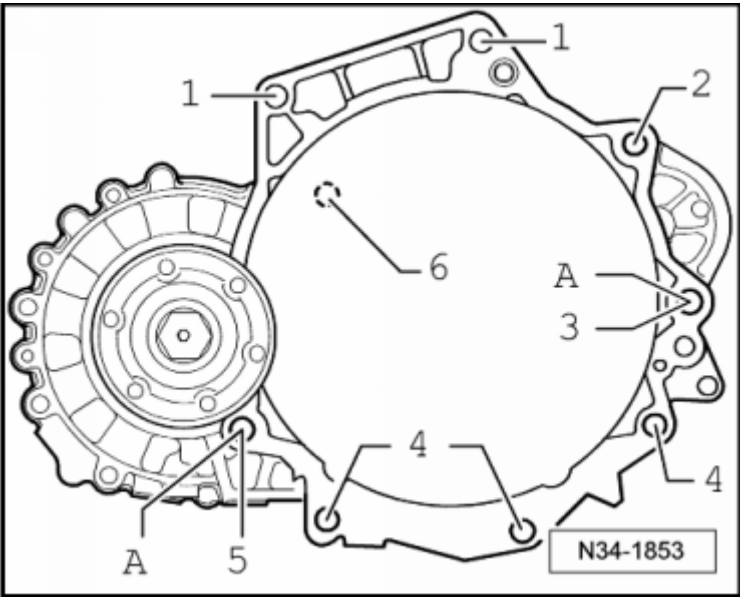
3 - Pressure Plate

4 - Bolt

- ☐ M6 Bolt: 13 Nm
- ☐ M7 Bolt: 20 Nm
- ☐ Loosen and tighten in small steps and in diagonal sequence

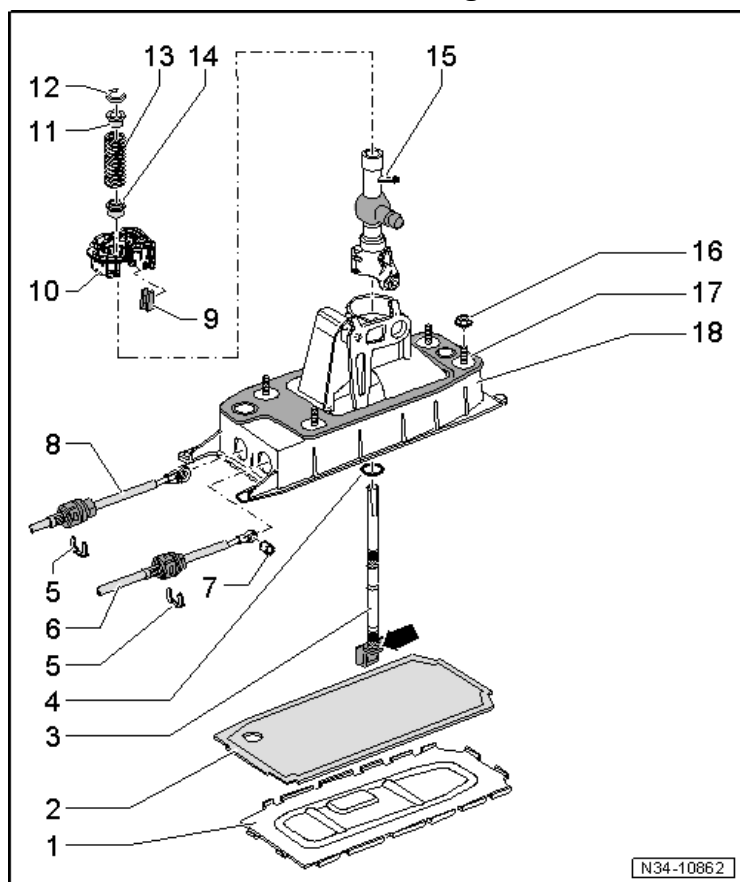
Controls, Housing – 0A4

Transmission to Engine Tightening Specifications



Item	Bolt	Qty.	Nm
1	M12 x 65	2	80
2	M12 x 170 Also starter to transmission	1	80
3	M12 x 170 Also starter to transmission	1	80
4	M10 x 65	3	40
5	M12 x 95	1	80
6	M6 x 8 Small flywheel cover plate (not pictured)	1	10
A	Alignment pins for centering		

Shift Lever and Housing Overview



- 1 - Base Plate**
☐ Always replace
- 2 - Gasket**
☐ Always replace
- 3 - Selector Lever**
- 4 - Washer**
- 5 - Lock Washer**
☐ Always replace
- 6 - Selector Cable**
- 7 - Bushing**
- 8 - Gearshift Cable**
- 9 - Insulation**
- 10 - Bearing Shell**
- 11 - Bushing**
- 12 - Lock Washer**
- 13 - Pressure Spring**
- 14 - Bushing**

15 - Gearshift Lever Guide

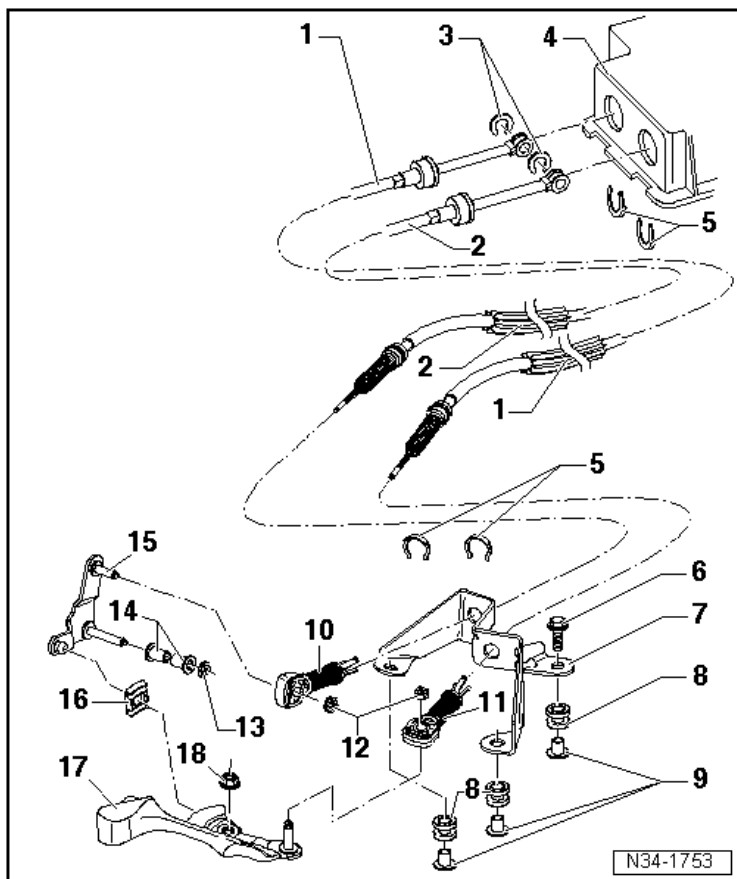
16 - Nut

- ☐ M8: 25 Nm
- ☐ M6: 8 Nm

17 - Gasket

18 - Selector Housing

Shift and Selector Cables Overview



- 1 - Gearshift Cable**
- 2 - Selector Cable**
- 3 - Lock Washer**
☐ Always replace
- 4 - Selector Housing**
- 5 - Lock Washer**
☐ Always replace
- 6 - Bolt**
☐ 20 Nm
- 7 - Cable Mounting Bracket**
- 8 - Grommet**
- 9 - Spacer**
- 10 - Cable Retainer**
- 11 - Cable Retainer**
- 12 - Lock Washer**
☐ Always replace
- 13**
- 14**
- 16**
- 17**
- 18**

13 - Lock Washer

- ☐ Always replace

14 - Bearing Bushing

15 - Relay Lever

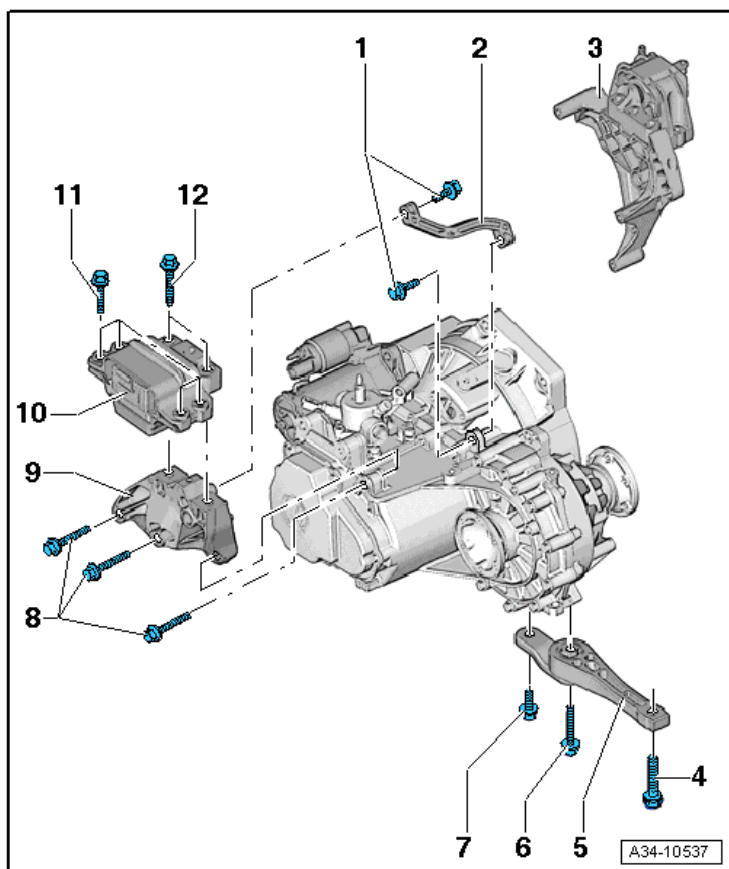
16 - Sliding Shoe

17 - Selector Lever

18 - Hex Nut

- ☐ 23 Nm
- ☐ Always replace

Engine and Transmission Mount and Bracket



1 - Bolt

- ☐ 20 Nm + 90° turn
- ☐ Replace after removing

2 - Transmission Support

3 - Engine Mount with Engine Support

4 - Bolt

- ☐ Refer to Suspension, Wheels, Steering

5 - Pendulum Support

6 - Bolt

- ☐ Refer to Suspension, Wheels, Steering

7 - Bolt

- ☐ Refer to Suspension, Wheels, Steering

8 - Bolt

- ☐ 40 Nm + 90° turn
- ☐ Replace after removing

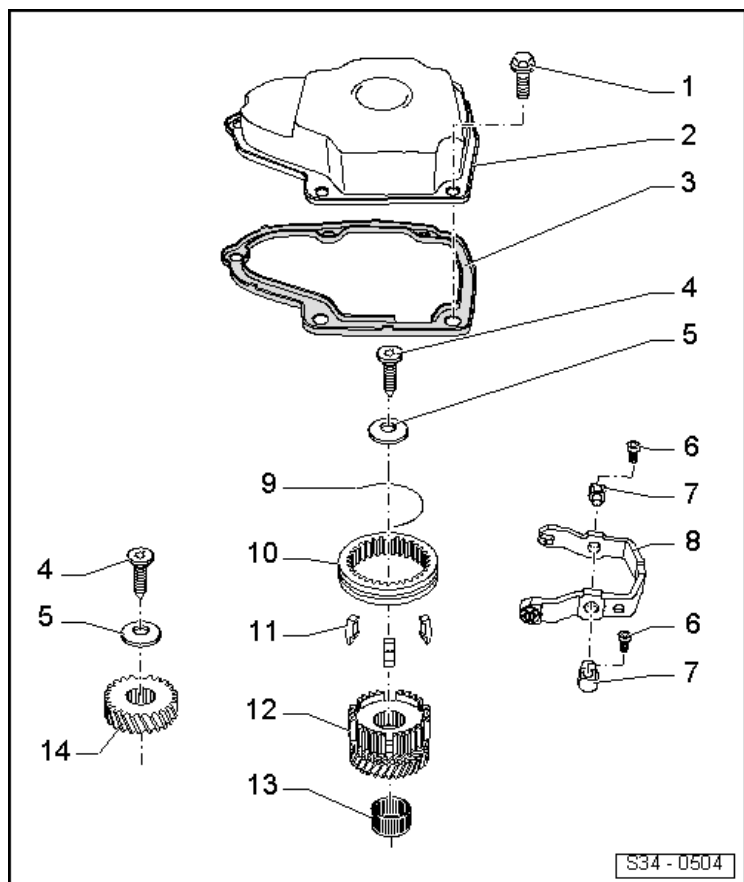
9 - Transmission Bracket**10 - Transmission Mount****11 - Bolt**

- ☐ Refer to Engine Assembly

12 - Bolt

- ☐ 60 Nm + 90° turn
- ☐ Replace after removing

Transmission Housing Cover and 5th Gear



1 - Bolt

- ☐ 18 Nm

2 - Transmission Housing Cover

3 - Gasket

4 - Bolt

- ☐ 80 Nm + 90° turn
- ☐ Replace after removing

5 - Plate Spring

6 - Cylinder Bolt

- ☐ 25 Nm

7 - Pivot Pin

8 - 5th Gear Shift Fork

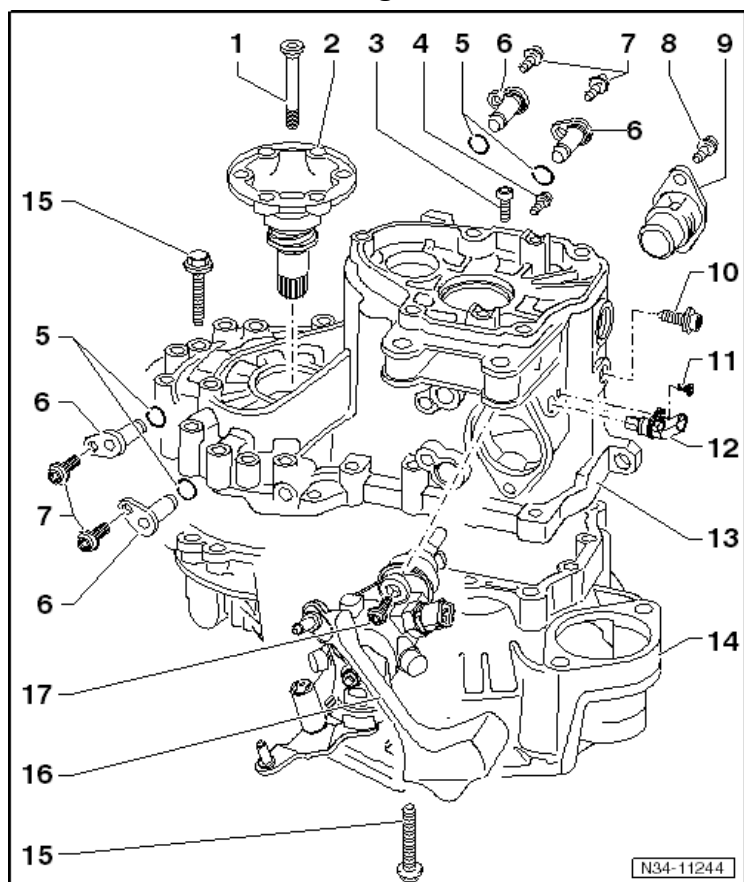
9 - Spring

10 - 5th Gear Locking Collar

11 - Locking Pieces

- 12 - Synchronizer Hub With Gear Wheel and 5th Gear Synchronizer Ring**
- 13 - Needle Bearing**
- 14 - 5th Gear Wheel**

Transmission Housing and Gear Shift Unit



1 - Bolt

- ☐ 25 Nm

2 - Flange Shaft With Pressure Spring

3 - Inner Torx® Bolt

- ☐ 25 Nm
- ☐ Always replace

4 - Inner Torx® Bolt

- ☐ 30 Nm
- ☐ Always replace

5 - O-ring

- ☐ Always replace

6 - Pivot Pin

7 - Bolt

- ☐ 25 Nm

8 - Bolt

- ☐ 25 Nm

9 - Cover

10 - Internal Multipoint Bolt

- ☐ 25 Nm
- ☐ Always replace

11 - Bolt

- ☐ 5 Nm

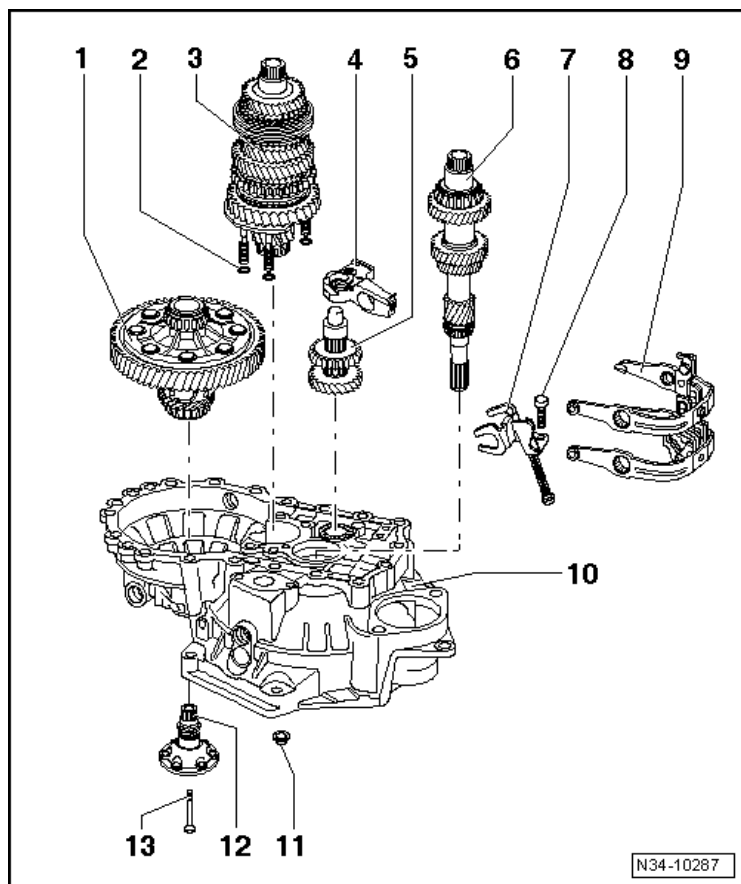
12 - Transmission Neutral Position Sensor -G701-**13 - Transmission Housing****14 - Clutch Housing****15 - Bolt**

- ☐ 25 Nm + 90° turn
- ☐ Always replace

16 - Gearshift Shaft with Gearshift Cover**17 - Internal Multipoint Bolt**

- ☐ 25 Nm

Input Shaft, Output Shafts, Differential and Shift Forks



1 - Input Shaft, Output Shafts, Differential and Shift Forks

2 - Seal

- ☐ Always replace

3 - Output Shaft

4 - Reverse Shaft Support

5 - Reverse Shaft

6 - Input Shaft

7 - Reverse Gear Shift Fork

8 - Inner Torx® Bolt Inner Torx® Bolt

- ☐ 25 Nm

9 - Selector Mechanism

10 - Clutch Housing

11 - Nut

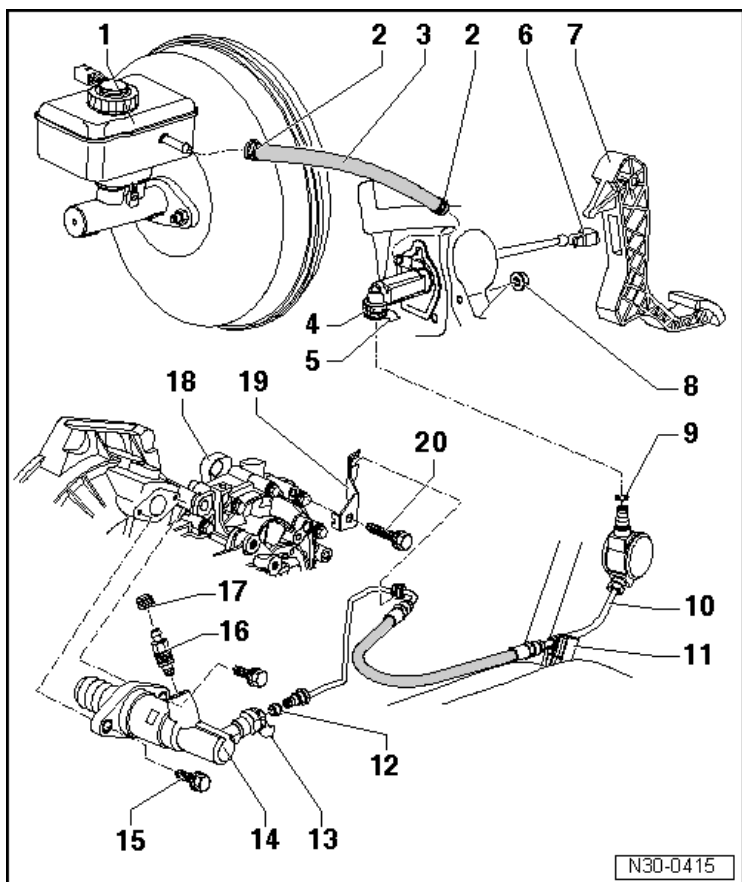
- ☐ 25 Nm + 90° turn
- ☐ Always replace

12 - Flange Shaft with Pressure Spring

13 - Bolt

☐ 25 Nm

Transmission and Clutch Housings



- 1 - Transmission Housing
- 2 - Needle Bearing
- 3 - Oil Filler Plug
- 35 Nm
- 4 - Outer Race/Tapered Roller Bearing
- 5 - Shim
- 6 - Shim
- 7 - Outer Race/Tapered Roller Bearing
- 8 - Outer Race/Tapered Roller Bearing
- 9 - Needle Sleeve
- 10 - Alignment Sleeve
- 11 - Clutch Housing
- 12 - Guide sleeve
- 13 - Cylinder Bolt
- 20 Nm
- 14 - Seal
- 15 - Sleeve

16 - Seal and Sleeve One-Piece

17 - Oil Drain Plug

☐ 35 N

18 - Outer Race/Tapered Roller Bearing

19 - Magnet

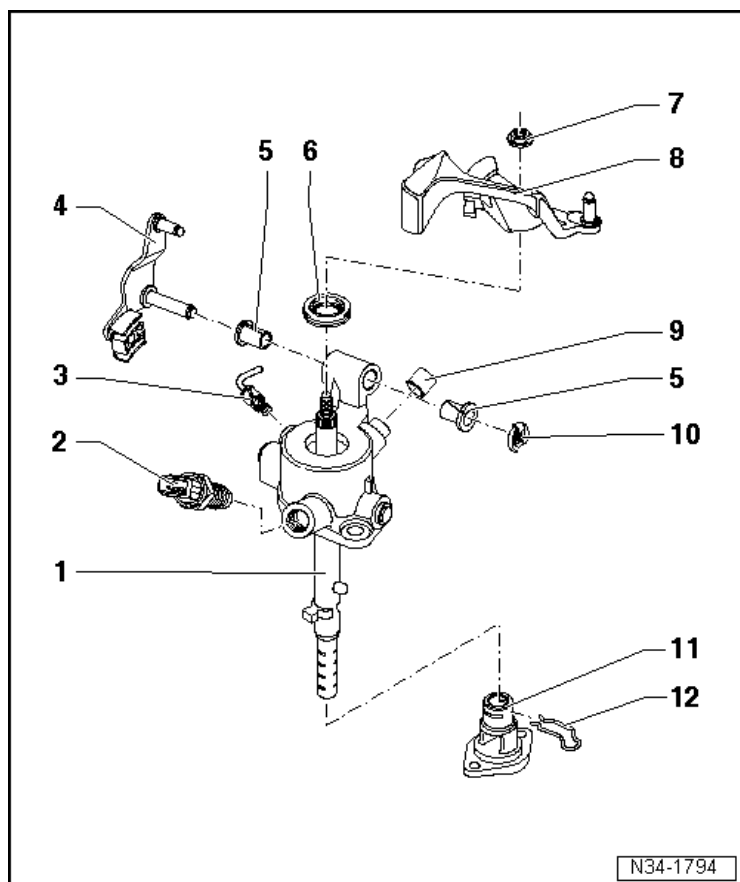
20 - Oil Catch Tray

21 - Outer Race/Tapered Roller Bearing

22 - Shim

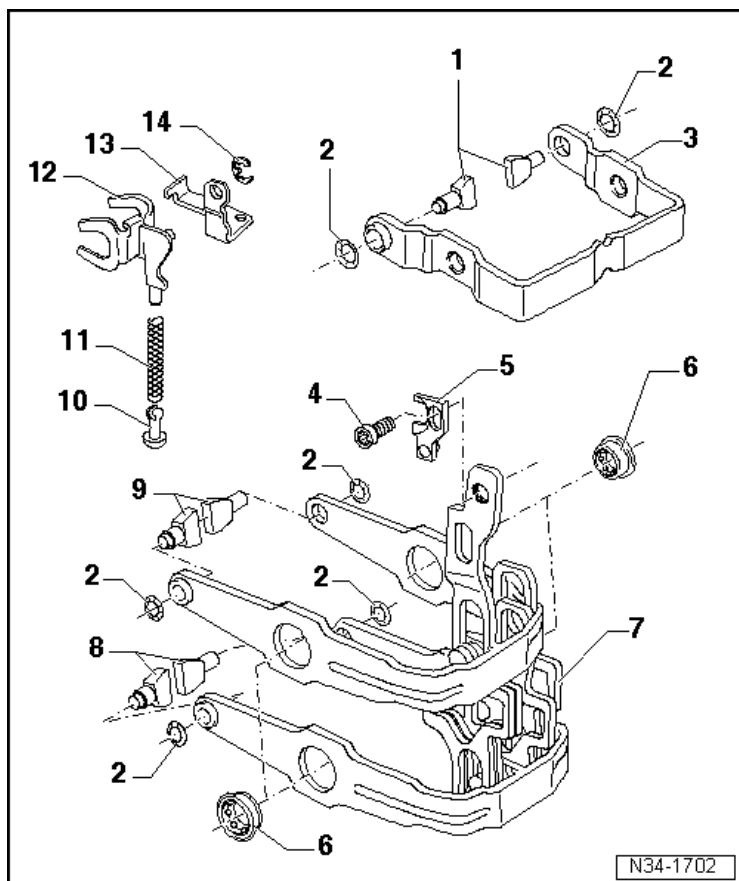
23 - Seal

Gear Shift Unit Overview



- 1 - Gearshift Unit**
- 2 - Back-Up Lamp Switch -F4-**
 - ☐ 20 Nm
- 3 - Locking Elbow**
- 4 - Relay Lever**
- 5 - Bearing Bushing**
- 6 - Seal**
- 7 - Hex Nut**
 - ☐ 23 Nm
 - ☐ Always replace
- 8 - Selector Lever**
- 9 - Cap**
- 10 - Lock Washer**
 - ☐ Always replace
- 11 - Cover**
- 12 - Spring**

Selector Forks Overview



N34-1702

- 1 - 5th Gear Shift Segment**
- 2 - Lock Washer**
 - ☐ Always replace
- 3 - 5th Gear Shift Fork**
- 4 - Bolt**
 - ☐ 25 Nm
- 5 - 5th Gear Shift Jaw**
- 6 - Angular Contact Ball Bearing**
- 7 - Shift Fork Group with Gearshift Rails**
- 8 - 1st/2nd Gear Shift Segment**
- 9 - 3rd/4th Gear Shift Segment**
- 10 - Glide**
- 11 - Spring**
- 12 - Reverse Gear Shift Fork**
- 13 - Support for Reverse Gear Shift Fork**
- 14 - Locking Ring**

Gears, Shafts – 0A4

Determining Shim Thickness

Example:	Bearing clearance measured value	Adjustment shim thickness according to the table
	1.21 mm	1.175 mm

Adjustment Shim Table

Bearing play	Adjusting shim
Measured value (mm)	Thickness (mm)
0.671 to 0.699	0.650
0.700 to 0.724	0.675
0.725 to 0.749	0.700
0.750 to 0.774	0.725
0.775 to 0.799	0.750
0.800 to 0.824	0.775
0.825 to 0.849	0.800
0.850 to 0.874	0.825
0.875 to 0.899	0.850
0.900 to 0.924	0.875
0.925 to 0.949	0.900
0.950 to 0.974	0.925
0.975 to 0.999	0.950
1.000 to 1.024	0.975
1.025 to 1.049	1.000
1.050 to 1.074	1.025
1.075 to 1.099	1.050
1.100 to 1.124	1.075
1.125 to 1.149	1.100
1.150 to 1.174	1.125
1.175 to 1.199	1.150
1.200 to 1.224	1.175
1.225 to 1.249	1.200
1.250 to 1.274	1.225
1.275 to 1.299	1.250
1.300 to 1.324	1.275
1.325 to 1.349	1.300
1.350 to 1.374	1.325
1.375 to 1.399	1.350
1.400 to 1.424	1.375
1.425 to 1.449	1.400
1.450 to 1.474	1.425
1.475 to 1.499	1.450

Bearing play	Adjusting shim
Measured value (mm)	Thickness (mm)
1.500 to 1.524	1.475
1.525 to 1.549	1.500
1.550 to 1.574	1.525
1.575 to 1.599	1.550
1.600 to 1.624	1.575
1.625 to 1.649	1.600
1.650 to 1.674	1.625
1.675 to 1.699	1.650
1.700 to 1.724	1.675

Refer to the Parts Catalog for the correct shims.

Using VW 447 i, remove the input shaft and the outer race/tapered roller bearing from the transmission housing.

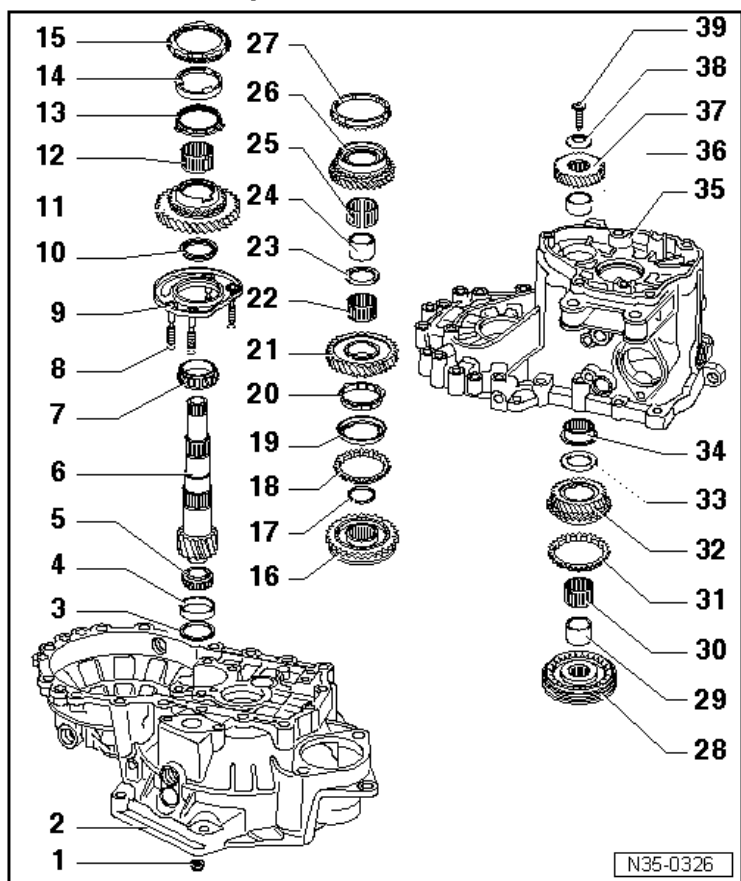
Install the shim with the correct thickness, thickest shim first.

If the measured shim thickness is larger than those listed in the table, then install two shims that add up to the necessary thickness.

Using VW 510, press the outer race/tapered roller bearing and the selected shim (1.175 mm in the example) into the transmission housing.

Assemble the transmission housing and tighten the bolts to 25 Nm plus an additional 90° (¼ turn).

Output Shaft, Overview



1 - Bolt

- ☐ 25 Nm + 90° turn
- ☐ Always replace

2 - Clutch Housing

3 - Shm

4 - Small Outer Race/Tapered Roller Bearing

5 - Bearing Inner Race/Small Tapered Roller Bearing

6 - Output Shaft

7 - Bearing Inner Race/Large Tapered Roller Bearing

8 - Seal

9 - Bearing Mount

10 - Thrust Washer

11 - 1st Gear Wheel

12 - Needle Bearing

13 - Synchronizer Ring

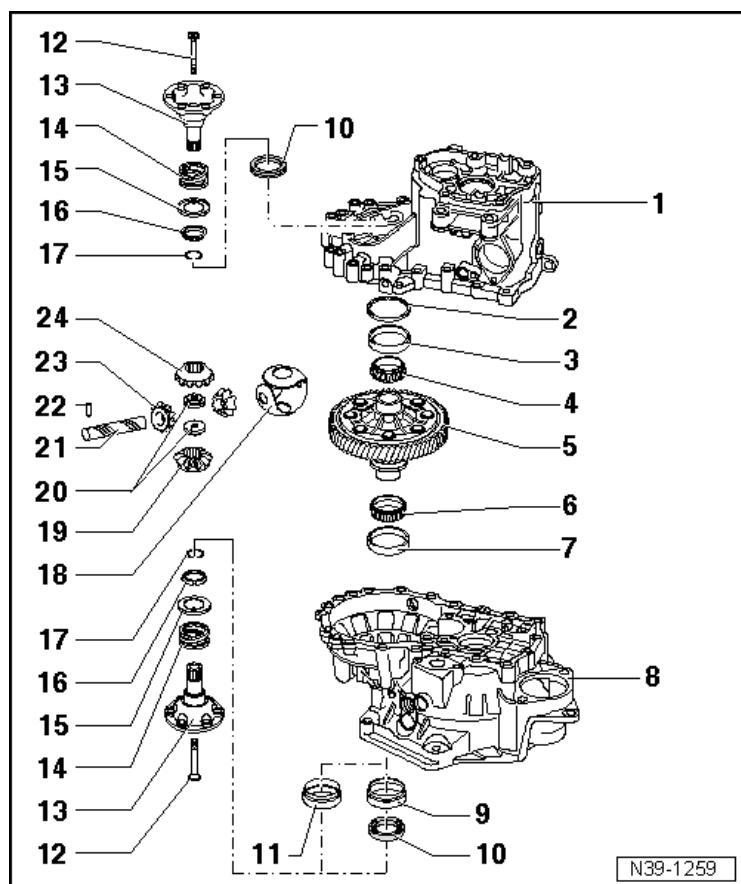
14 - 1st Gear Outer Race

15 - 1st Gear Synchronizer Ring

- 16 - Locking Collar with Synchronizer Hub for 1st and 2nd Gears
- 17 - Locking Ring
- 18 - 2nd Gear Synchronizer Ring
- 19 - 2nd Gear Outer Race
- 20 - Synchronizer Ring
- 21 - 2nd Gear Wheel
- 22 - Needle Bearing
- 23 - Thrust Washer
- 24 - Sleeve For The 3rd Gear Needle Bearing
- 25 - Needle Bearing
- 26 - 3rd Gear Wheel
- 27 - 3rd Gear Synchronizer Ring
- 28 - Locking Collar With Synchronizer Hub For 3rd And 4th Gears
- 29 - Sleeve
- 30 - Needle Bearing
- 31 - 4th Gear Synchronizer Ring
- 32 - 4th Gear Wheel
- 33 - Thrust Washer
- 34 - Needle Bearing
- 35 - Transmission Housing
- 36 - Sleeve
- 37 - 5th Gear Wheel
- 38 - Plate Spring
- 39 - Bolt
 - ☐ See Transmission Housing Cover and 5th Gear
 - ☐ Always replace

Rear Final Drive, Differential – 0A4

Differential Overview



1 - Transmission Housing

2 - Shim

3 - Outer Race/Tapered Roller Bearing

4 - Bearing Inner Race/Taper Roller Bearing

5 - Differential housing

6 - Bearing Inner Race/Taper Roller Bearing

7 - Outer Race/Tapered Roller Bearing

8 - Clutch Housing

9 - Sleeve

10 - Seal

11 - Seal and Sleeve One-Piece

12 - Bolt

□ 25 Nm

13 - Flange Shaft

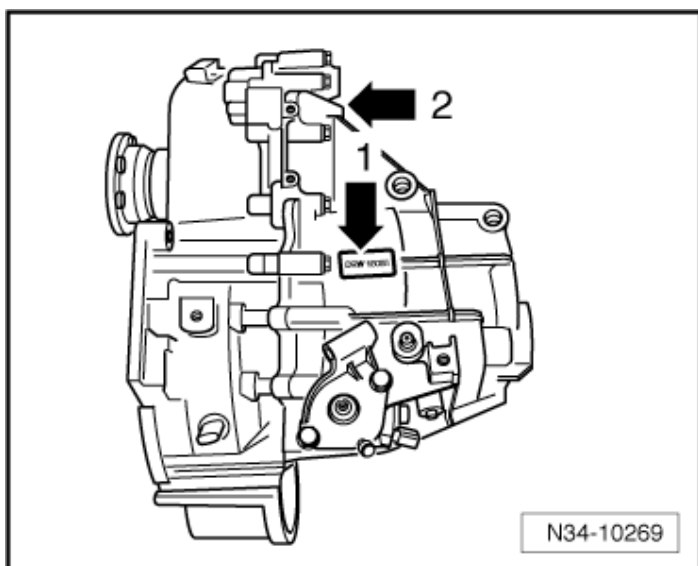
14 - Flange Shaft Pressure Spring

- 15 - Thrust Washer
- 16 - Tapered Ring
- 17 - Locking Ring
- 18 - Thrust Washer Union
- 19 - Large Differential Bevel Gear
- 20 - Threaded Piece
- 21 - Differential Taper Axle
- 22 - Adapter Sleeve
- 23 - Small Differential Bevel Gear
- 24 - Large Differential Bevel Gear

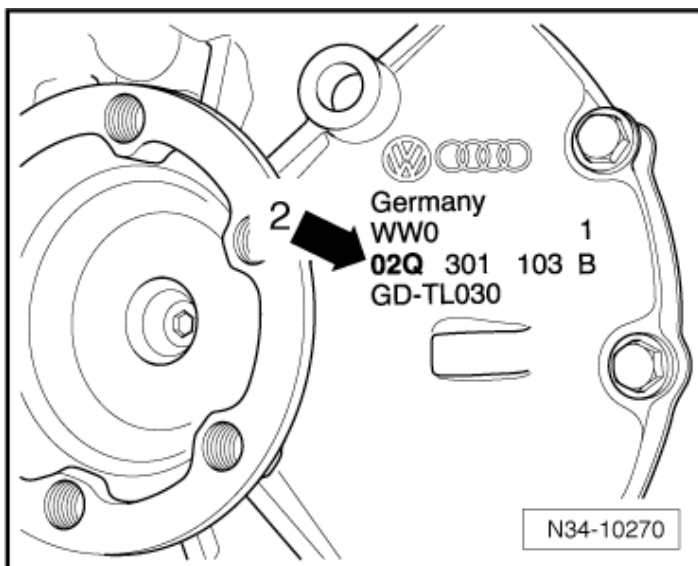
MANUAL TRANSMISSION – 02Q

General Information

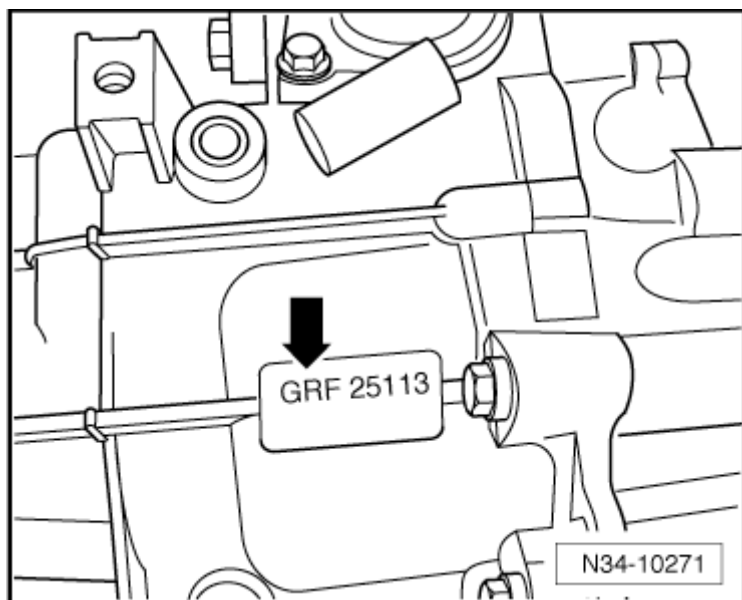
Transmission Identification



Code letters and build date (1 ➡).
Manual transmission 02Q (2 ➡).



Manual transmission 02Q (2 ➡).



Transmission code letters and build date (➡).

Example:	GRF	25	11	3
	Identification codes	Day	Month	Year (2003) of manufacture

Codes Letters, Transmission Allocation and Capacities

Transmission		6 Speed 02Q	
Identification Codes		NFP	MDL
Manufactured	from through	05.10	11.09
Allocation	Type	Jetta from MY 2011	Jetta from MY 2011
	Engine	2.0L - 104 kW TDI	2.0L - 147 kW TFSI
Ratio: $Z_2 : Z_1$	Final drive I ¹⁾	69:20 = 3.450	70:19 = 3.684
	Final drive II ²⁾	69:25 = 2.760	70:24 = 2.917
Capacities		Refer to Fluid Capacity Tables Rep. Gr. 03	Refer to Fluid Capacity Tables Rep. Gr. 03
Drive axle flange diameter		107 mm	107 mm

¹⁾ Final drive for 1st through 4th gear.

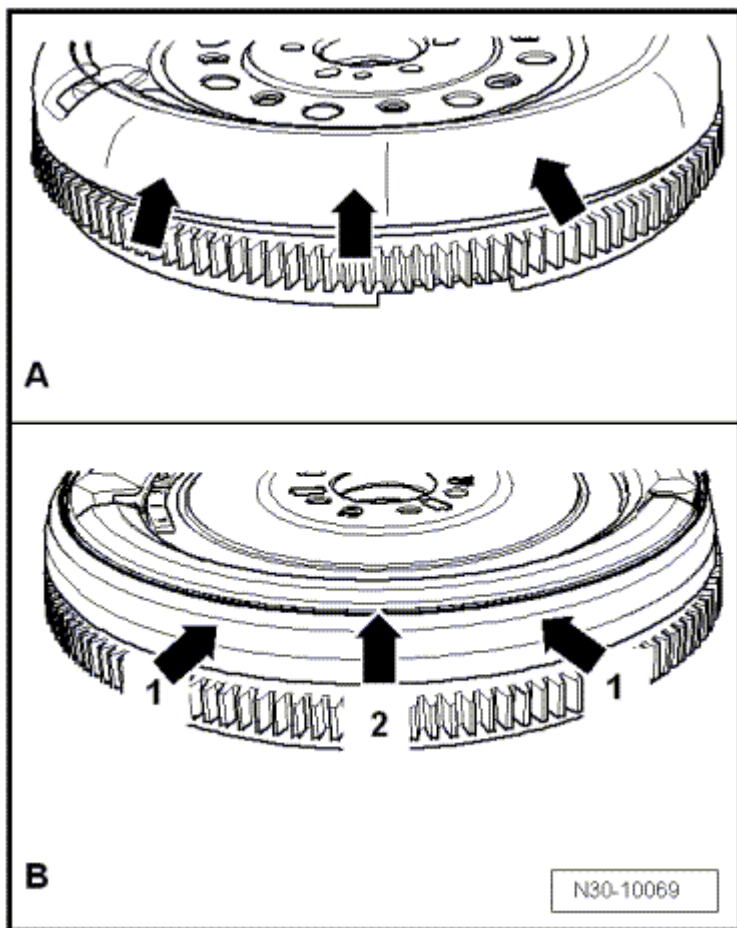
²⁾ Final drive for 5th gear, 6th gear and reverse gear.

Refer to the Parts Catalog for the following information:

- The individual gear ratios
- Transmission fluid specifications
- Clutch disc and pressure plate allocation

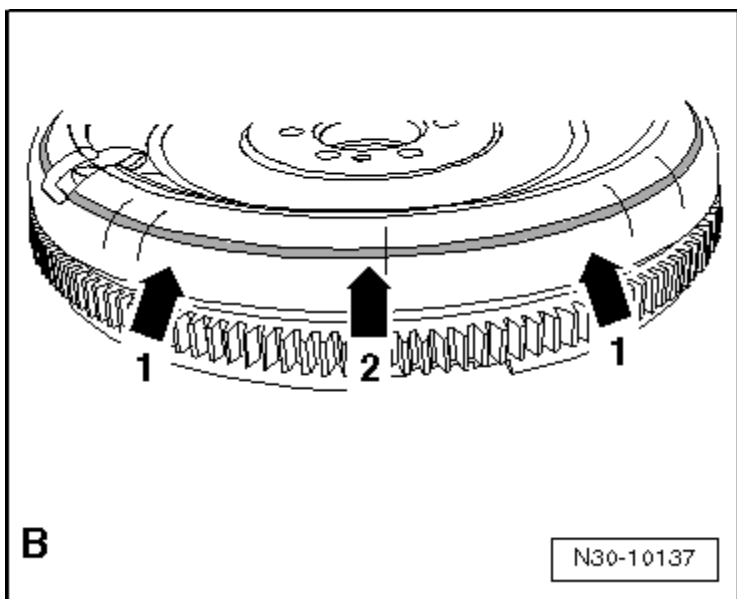
Clutch – 02Q

Determining Clutch Manufacturer



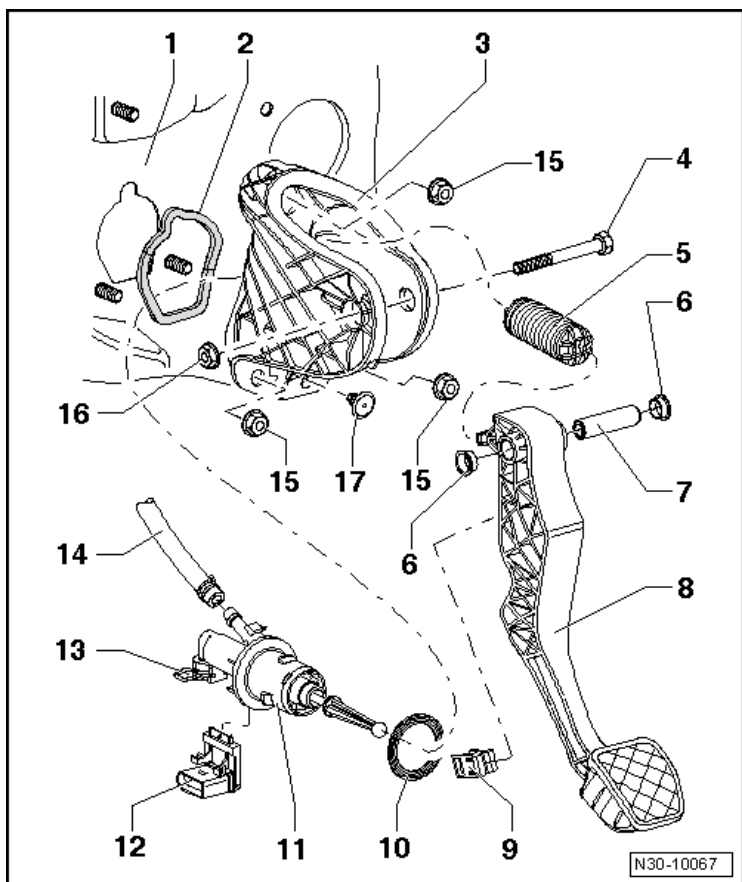
A) Round outer contour (➡) indicates a clutch manufactured by Sachs.

B) Squared outer contour (1 ➡) and a depression all the way around (2 ➡) indicates a clutch manufactured by LuK.



- B) Round outer contour (1 ➡) and a depression all the way around (2 ➡) indicates a clutch manufactured by LuK.

Clutch Pedal Overview



- 1 - Bulkhead
- 2 - Gasket
 - ☐ Replace after removing
- 3 - Bracket
- 4 - Bolt
- 5 - Over-Center Spring
- 6 - Bearing Bushing
- 7 - Mounting Pin
- 8 - Clutch Pedal
- 9 - Base Plate
- 10 - Gasket
 - ☐ Replace after removing
- 11 - Clutch Master Cylinder
- 12 - Clutch Position Sensor -G476-
- 13 - Clamp
- 14 - Supply Hose

15 - Nut

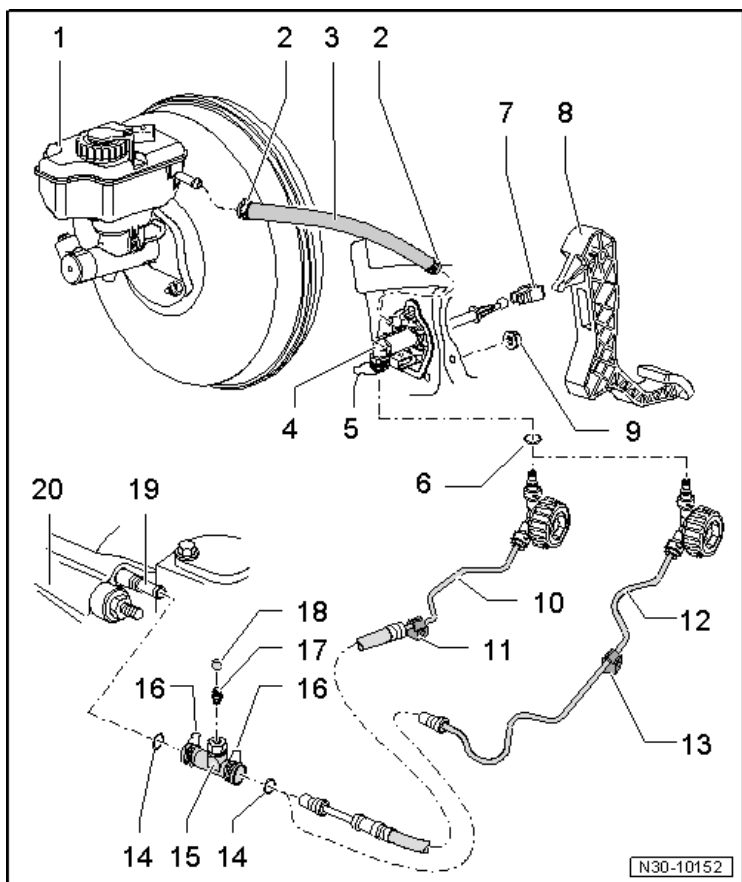
- ☐ 25 Nm
- ☐ Replace after removing

16 - Nut

- ☐ 25 Nm
- ☐ Replace after removing

17 - Jounce Bumper

Clutch Hydraulic System Overview

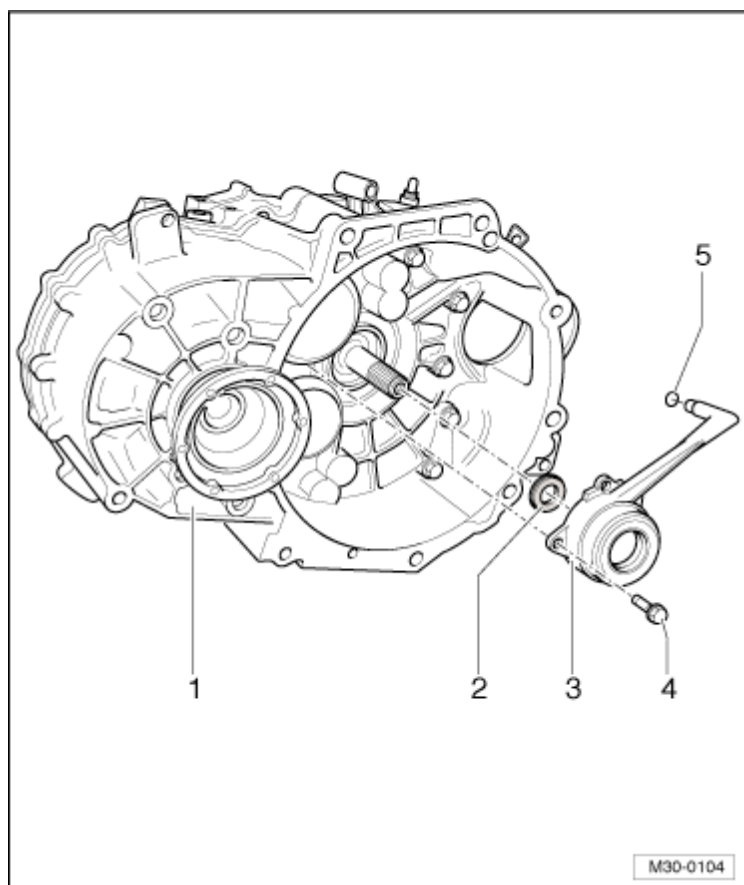


- 1 - Brake Fluid Reservoir
- 2 - Spring Clamp
- 3 - Supply Hose
- 4 - Clutch Master Cylinder
- 5 - Clip
- 6 - O-ring or Seal
- 7 - Mount
- 8 - Clutch Pedal
- 9 - Hexagon Nut
 - ☐ 25 Nm
 - ☐ Replace after removing
- 10 - Hose/Line Assembly
- 11 - Bracket
- 12 - Pipe
- 13 - Bracket
- 14 - O-ring or Seal
- 15 - Breather Assembly

- 16 - Clip**
- 17 - Bleed Valve**
- 18 - Dust Cap**
- 19 - Clutch Slave Cylinder**
- 20 - Transmission**

**Manual Trans. –
02Q**

Clutch Release Mechanism Overview



1 - Transmission

2 - Input Shaft Seal

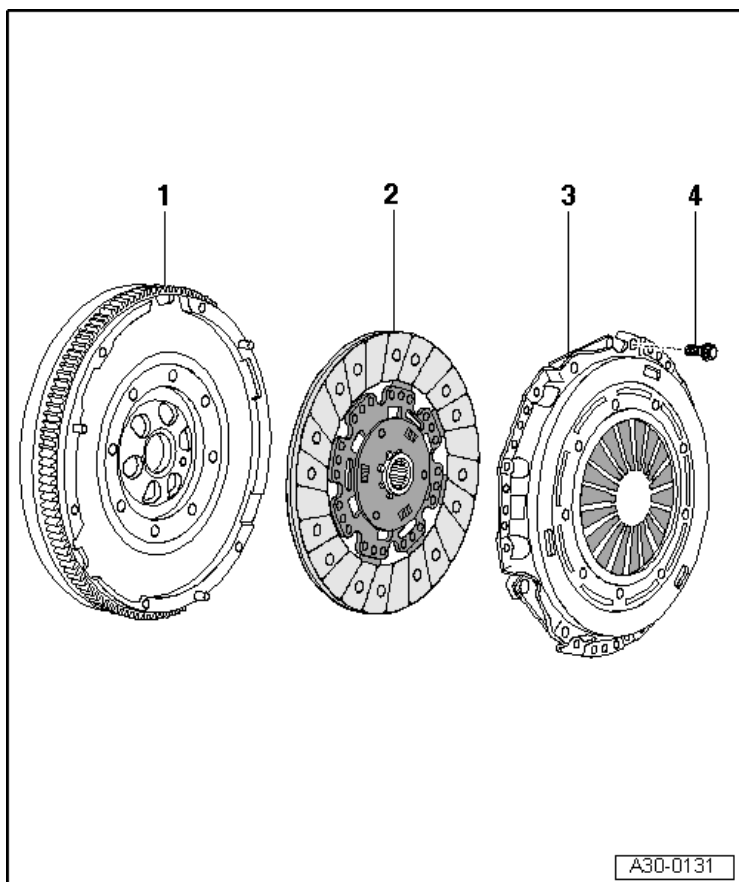
3 - Clutch Slave Cylinder with Release Bearing

4 - Bolt

- ☐ Without locking compound: tighten to 12 Nm (clutch slave cylinder with metal housing only).
- ☐ With locking compound: tighten to 15 Nm (clutch slave cylinder with plastic housing only).

5 - O-ring

Clutch Overview, Sachs



1 - Dual Mass Flywheel

2 - Clutch Disc

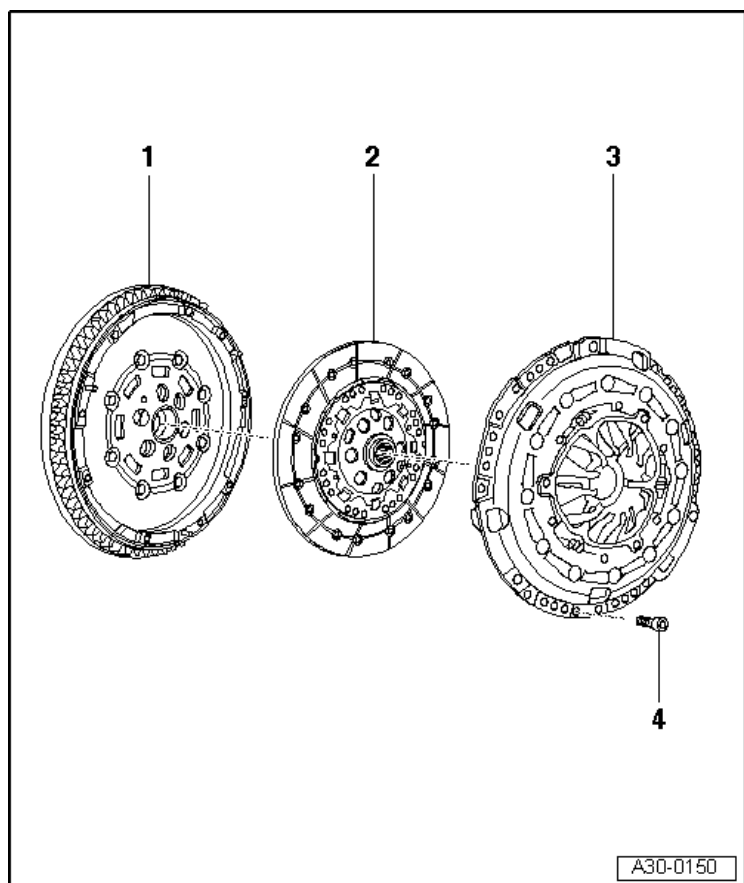
3 - Pressure Plate

4 - Bolt

- ☐ M6 Bolt: 13 Nm
- ☐ M7 Bolt: 20 Nm
- ☐ Loosen and tighten in small steps and in diagonal sequence

Manual Trans. –
02Q

Clutch Overview, Luk



1 - Dual Mass Flywheel

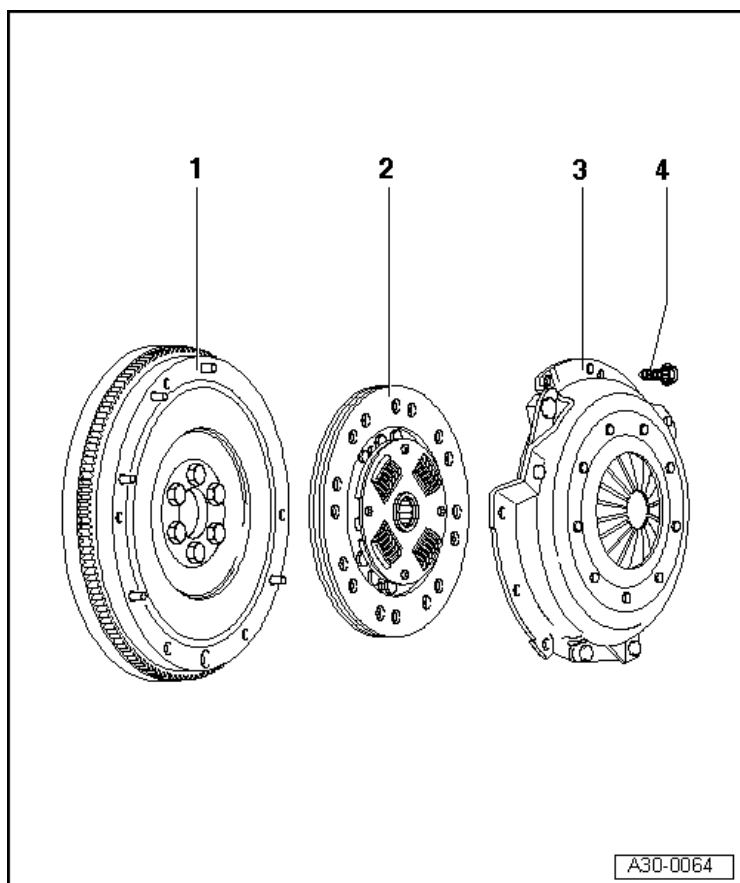
2 - Clutch Disc

3 - SAC Pressure Plate

4 - Bolt

- ☐ M6 Bolt: 13 Nm
- ☐ M7 Bolt: 20 Nm
- ☐ Loosen and tighten in small steps and in diagonal sequence

Clutch Overview, One-Piece



1 - Flywheel

2 - Clutch Disc

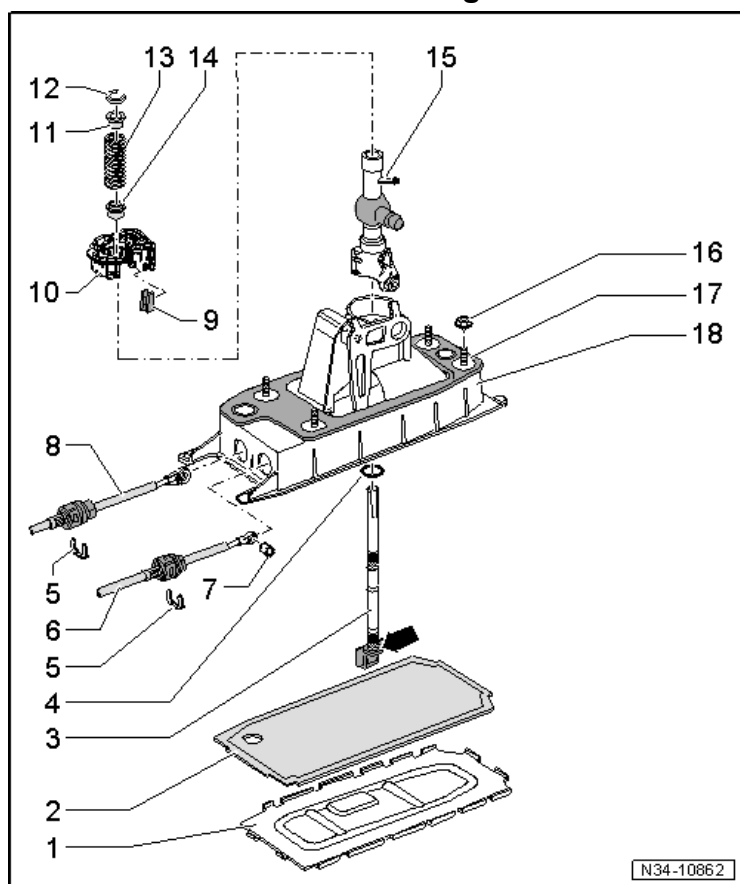
3 - Pressure Plate

4 - Bolt

- ☐ M6 Bolt: 13 Nm
- ☐ M7 Bolt: 20 Nm
- ☐ Loosen and tighten in small steps and in diagonal sequence

Controls, Housing – 02Q

Shift Lever and Housing Overview



1 - Base Plate

☐ Always replace

2 - Gasket

☐ Always replace

3 - Selector Lever

4 - Washer

5 - Lock Washer

☐ Always replace

6 - Selector Cable

7 - Bushing

8 - Gearshift Cable

9 - Insulation

10 - Bearing Shell

11 - Bushing

12 - Lock Washer

13 - Pressure Spring

14 - Bushing

15 - Gearshift Lever Guide

16 - Nut

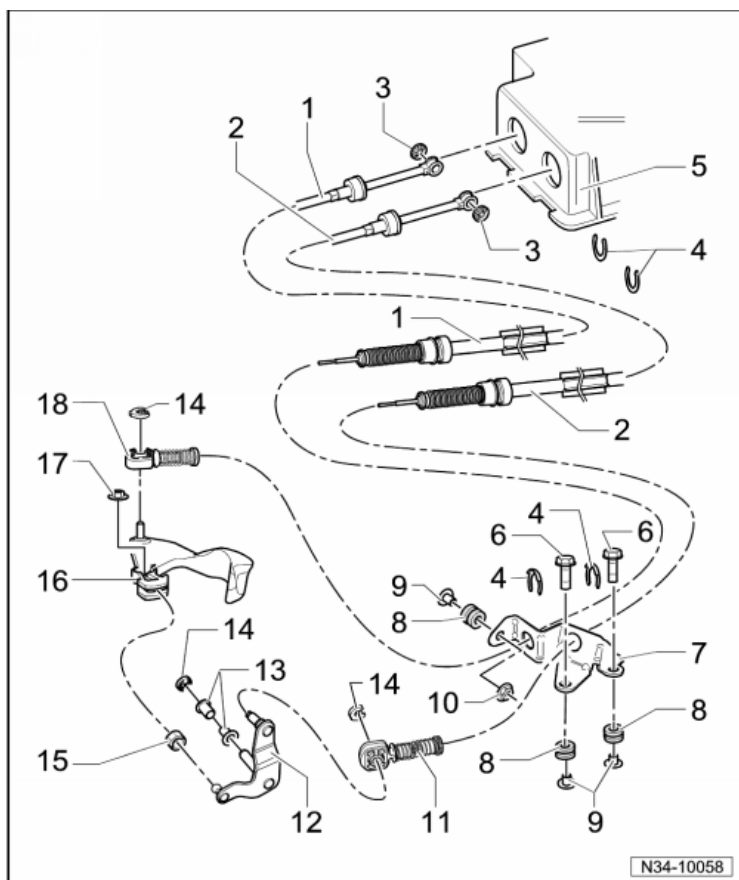
☐ M8: 25 Nm

☐ M6: 8 Nm

17 - Gasket

18 - Selector Housing

Shift and Selector Cables Overview



1 - Shift Cable

2 - Selector Cable

3 - Lock Washer

☐ Replace after removing

4 - Lock Washer

☐ Replace after removing

5 - Shift Housing

6 - Bolt

☐ 20 Nm

7 - Cable Bracket

8 - Grommet

9 - Spacer

10 - Nut

☐ 20 Nm

11 - Cable Retainer

12 - Relay Lever

13 - Bushing

14 - Circlip

- ☐ Replace after removing

15 - Sliding Shoe

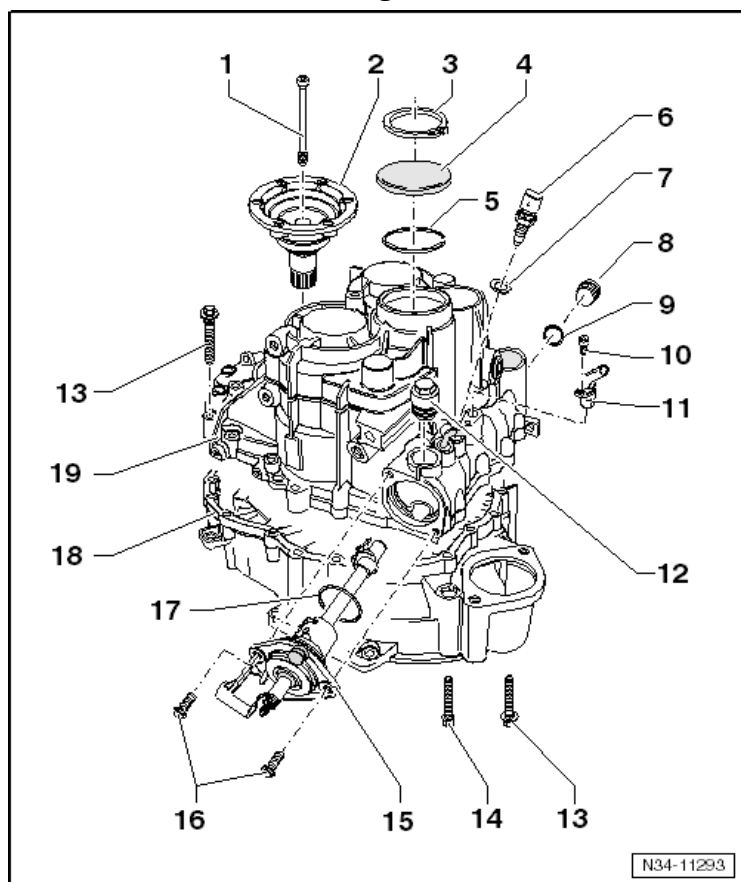
16 - Shift Lever

17 - Nut

- ☐ 23 Nm
- ☐ Replace after removing

18 - Cable Retainer

Transmission Housing and Gear Shift Unit



1 - Bolt

- ☐ 23 Nm

2 - Flange Shaft With Pressure Spring

3 - Circlip

4 - Cover

5 - Lock Ring

6 - Backup Lamp Switch -F4-

- ☐ 20 Nm

7 - Seal

- ☐ Replace after removing
- ☐ Not installed on all transmissions

8 - Oil Drain Plug

- ☐ Fill or drain plug with a multipoint socket head, 45 Nm
- ☐ Fill or drain plug with a hex socket head, 30 Nm

9 - Seal

- ☐ Replace after removing

10 - Bolt

- ☐ 6 Nm

11 - Transmission Neutral Position Sensor -G701-

- ☐ Not available in the US/Canadian market.

12 - Locking Screw**13 - Bolt**

- ☐ Always replace.
- ☐ Internal hex round head aluminum M9 bolt 15 Nm + 180° turn.
- ☐ Outer hex head steel bolt 15 Nm + an additional 90° turn.

14 - Bolt

- ☐ Always replace.
- ☐ Internal hex round head aluminum M9 bolt 15 Nm + 180° turn.
- ☐ Outer hex head steel bolt 15 Nm + an additional 90° turn.

15 - Gear Shift Unit**16 - Bolt**

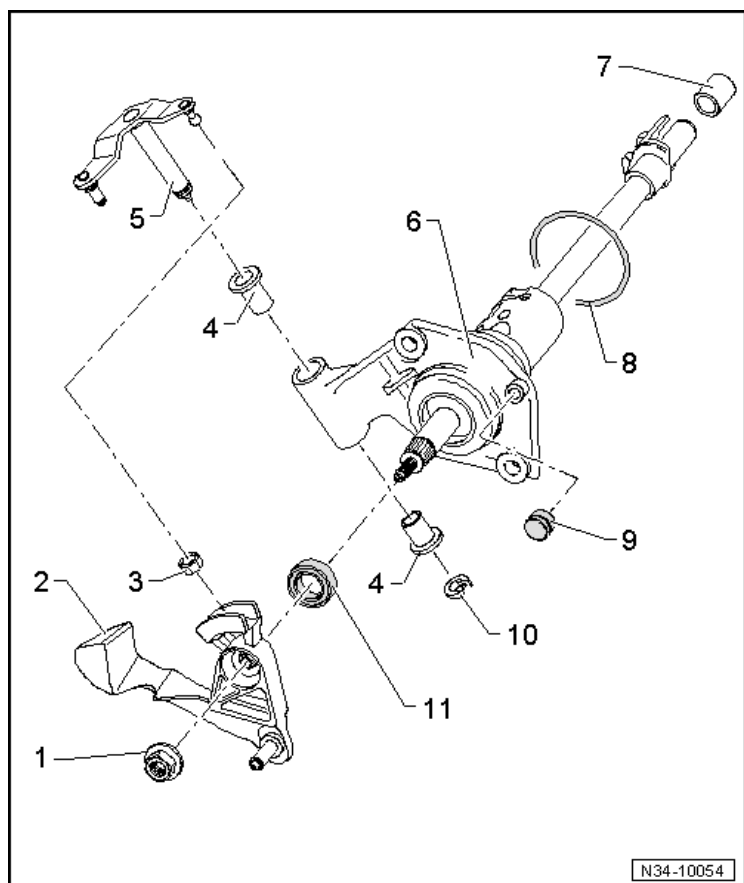
- ☐ 20 Nm
- ☐ Replace after removing

17 - O-ring

- ☐ Replace after removing

18 - Clutch Housing**19 - Transmission Housing**

Gear Shift Unit Overview



1 - Nut

- ☐ 23 Nm
- ☐ Always replace

2 - Transmission Shift Lever

3 - Sliding Shoe

4 - Bushing

5 - Relay Lever

6 - Gear Shift Unit

7 - Bushing

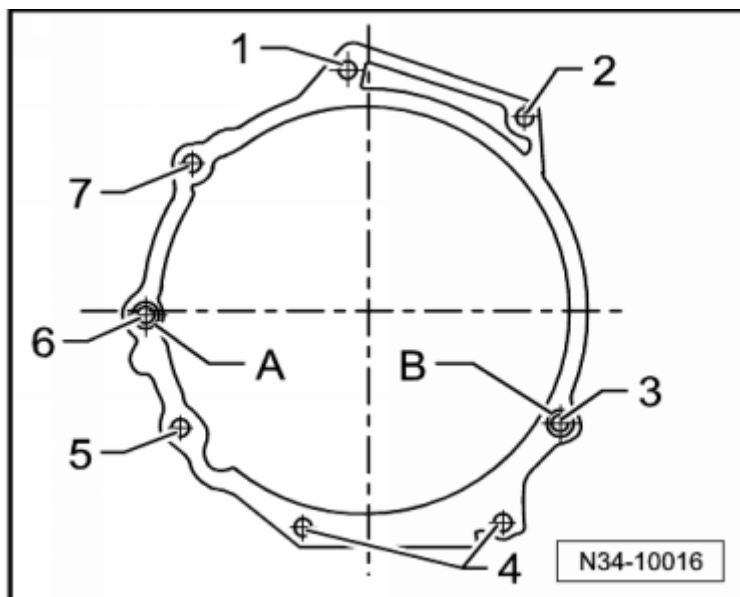
8 - O-ring

9 - Cap

10 - Circlip

11 - Selector Shaft Seal

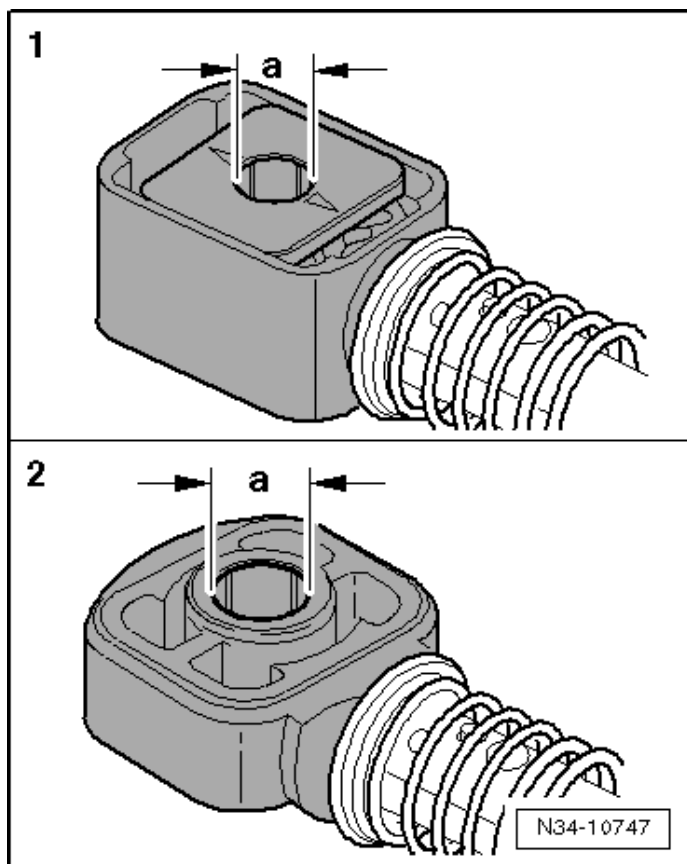
Transmission to Engine Tightening Specifications



Manual Trans. –
02Q

Item	Bolt	Qty.	Nm
1	M12 x 55 With a short M8 threaded pin or M12 x 50 Without threaded pin	1	80
2	M12 x 55 With long M8 threaded pin	1	80
3	M12 x 70 or M12 x 65	1	80
4	M10 x 50	2	40
5	M10 x 105	1	40
6	M12 x 165 With a short M8 threaded pin Also starter to transmission	1	80
7	M12 x 165 With a short M8 threaded pin Also starter to transmission	1	80
-	M6 x 8 Small flywheel cover plate (not present on all engines)	1	10
A and B: Centering alignment sleeves			

Cable Retainer Allocation



Cable Retainer for	Dimension a
1- Shift cable to transmission shift lever from 06.06	8.5 mm
2- Shift cable to transmission shift lever to 05.06	10 mm
2 - Selector cable to metal relay lever	8 mm
2 - Selector cable to plastic relay lever	10 mm

Gears, Shafts – 02Q

Adjustment Shim Table

Thickness (mm)		
1.45	1.75	2.05
1.50	1.80	2.10
1.55	1.85	2.15
1.60	1.90	2.20
1.65	1.95	2.25
1.70	2.00	

Rear Final Drive, Differential – 02Q

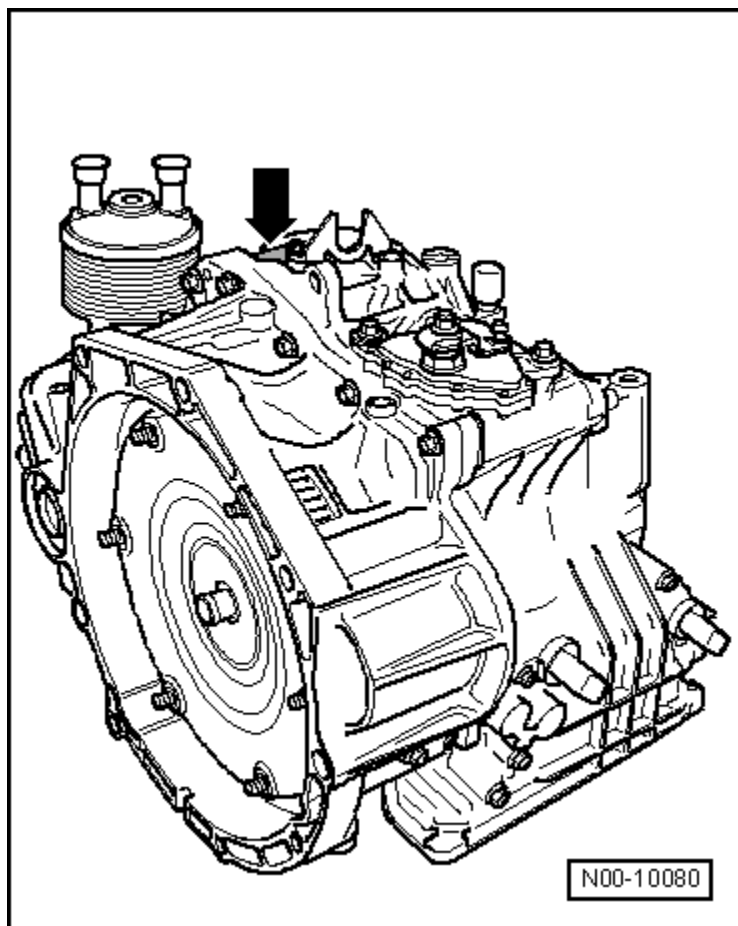
Fastener Tightening Specifications

Component	Fastener Size	Nm
Flange shaft bolt	-	33

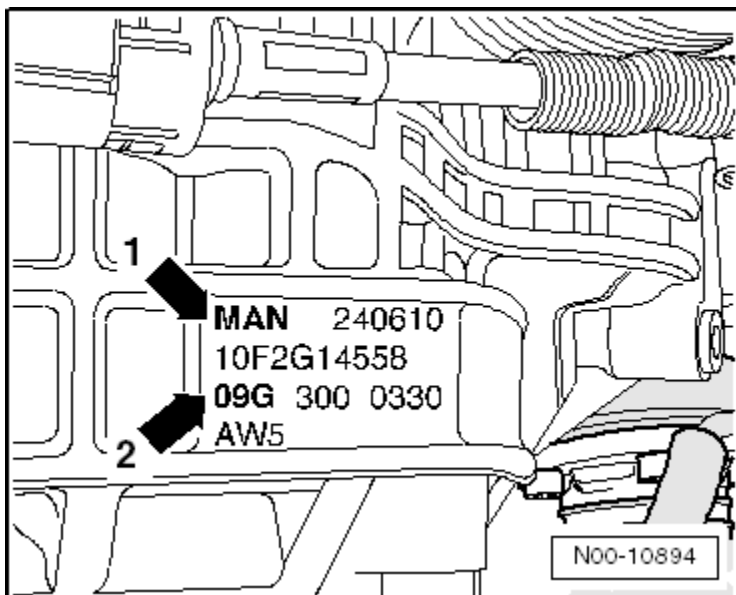
AUTOMATIC TRANSMISSION – 09G

General, Technical Data

Identification on Transmission



Code letters (➡)



Code letter (1 ➡) indicates 6-speed automatic transmission 09G (2 ➡).

Example:	MAN	24	06	10
	Identification codes	Day	Month	Year (2010) of manufacture

The transmission code letters are also included on the vehicle data labels.

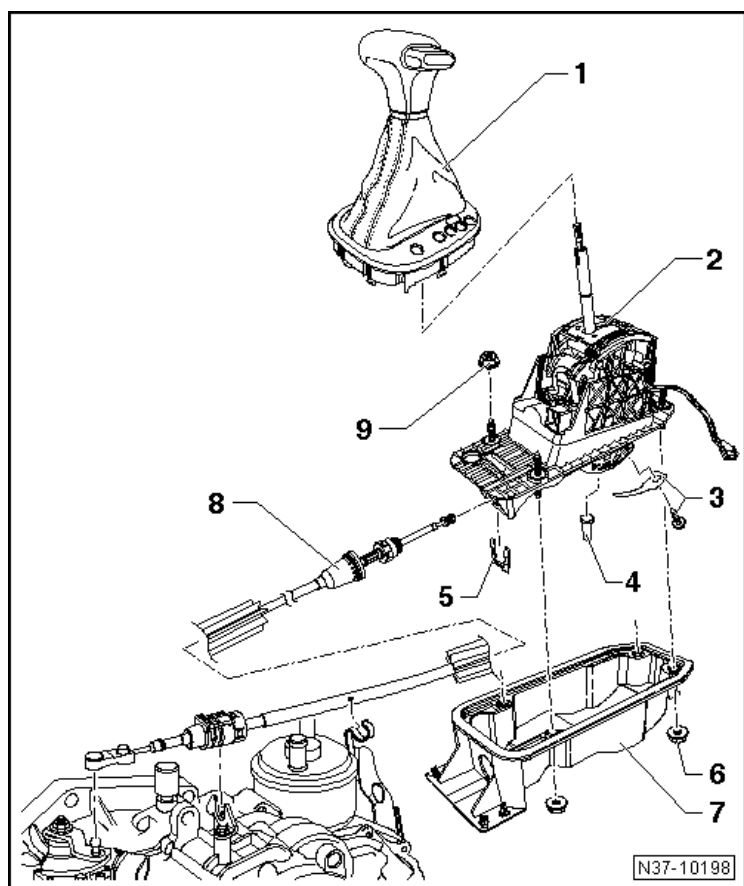
Code Letters, Assembly Allocation and Ratios

If original replacement parts are needed for a repair, always pay attention to the transmission codes.

Automatic Transmission 09G			
Identification codes	MAM	HDN, HFU, HRM, JUJ	KBV, KGL, MAN, PDW
Engine	2.0L - 85 kW	2.5L - 110 kW	2.5L - 125 kW

Controls, Housing – 09G

Selector Mechanism Overview



1 - Shift Cover with Handle

2 - Selector Mechanism with Selector Lever

3 - Bolt with spring

☐ 3 Nm

4 - Bolt

☐ Do not lubricate

5 - Locking Plate

☐ Always replace after removing

6 - Nut

☐ 9 Nm

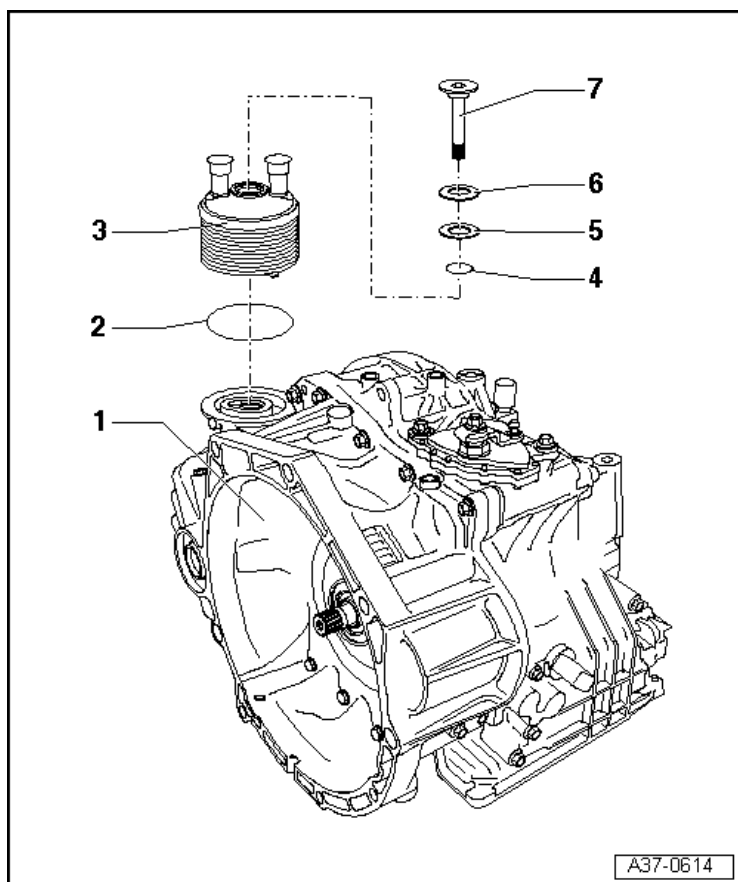
7 - Selector Housing

8 - Selector Lever Cable

9 - Nut and Washer

☐ 8 Nm

ATF Cooler Overview, Round Version



1 - Transmission

2 - O-ring

☐ Replace after removing

3 - ATF Cooler

4 - O-ring

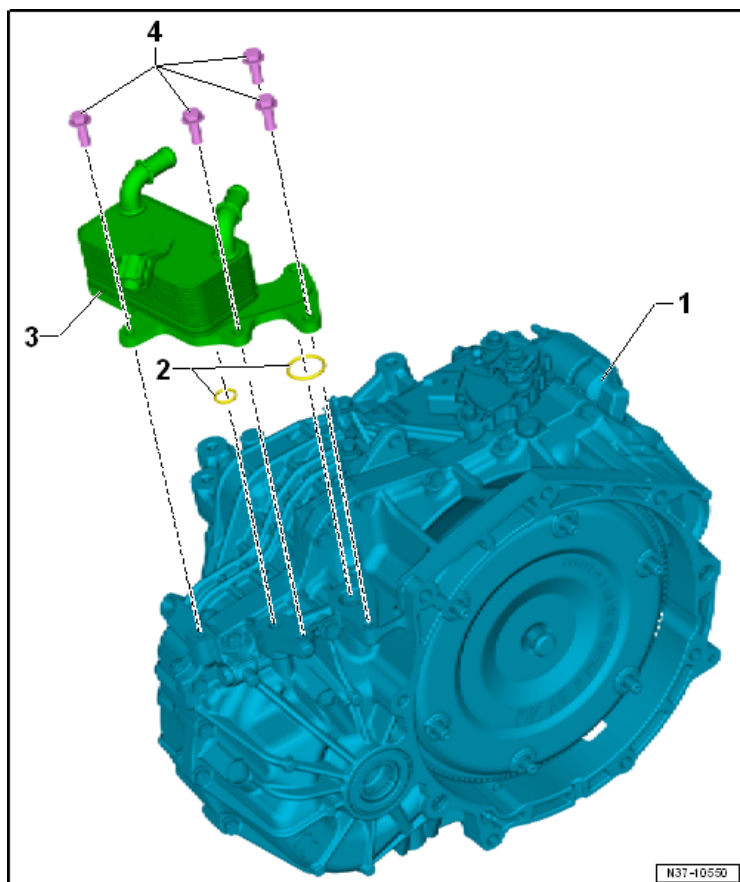
5 - Washer

6 - Plate Spring

7 - Bolt

☐ 36 Nm

ATF Cooler Overview, Rectangular Version



1 - Transmission

2 - O-ring

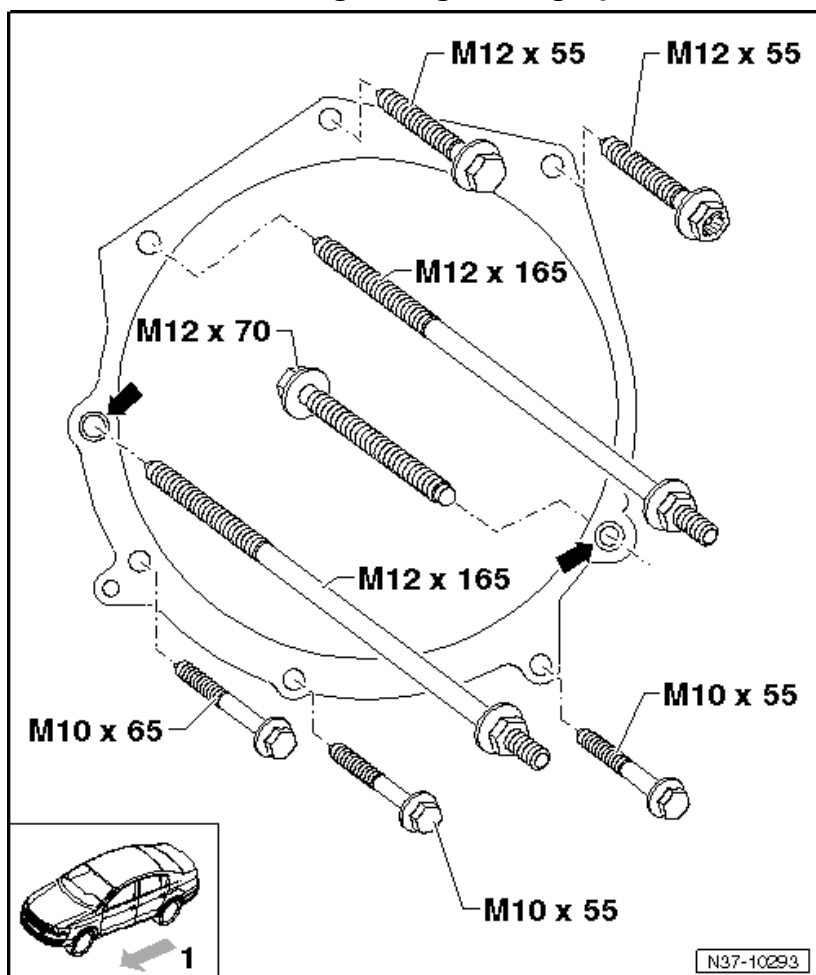
☐ Replace after removing

3 - ATF Cooler

4 - Bolt

☐ 20 Nm

Transmission to Engine Tightening Specifications

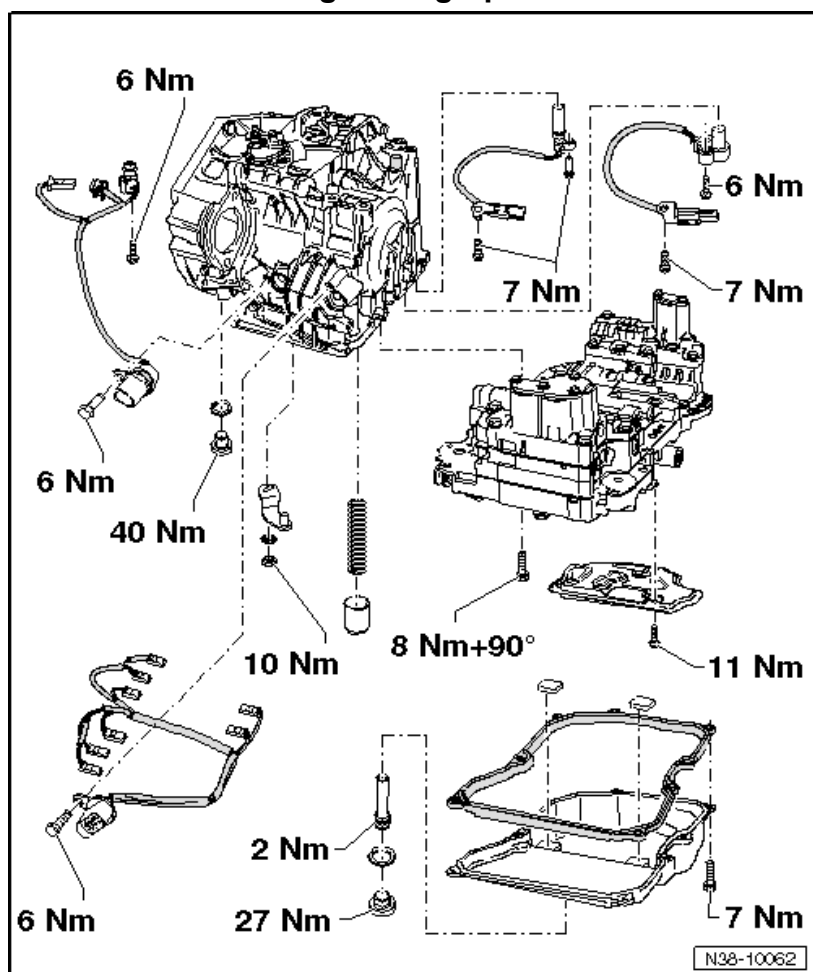


Auto Trans. – 09G

Component	Fastener size	Nm
Drive plate-to-converter	-	60
Bolts	M12	80 or 65, if using T10179
Bolts located in the lower flange	M10	40
Alignment pins ➡ for centering		

Gears, Hydraulic Controls – 09G

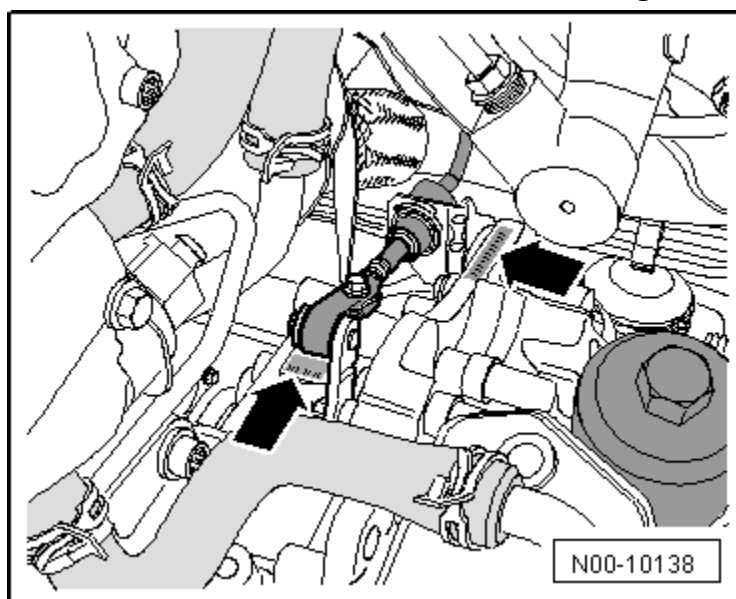
Fastener Tightening Specifications



DIRECT SHIFT GEARBOX (DSG) TRANSMISSION – 02E

General Information

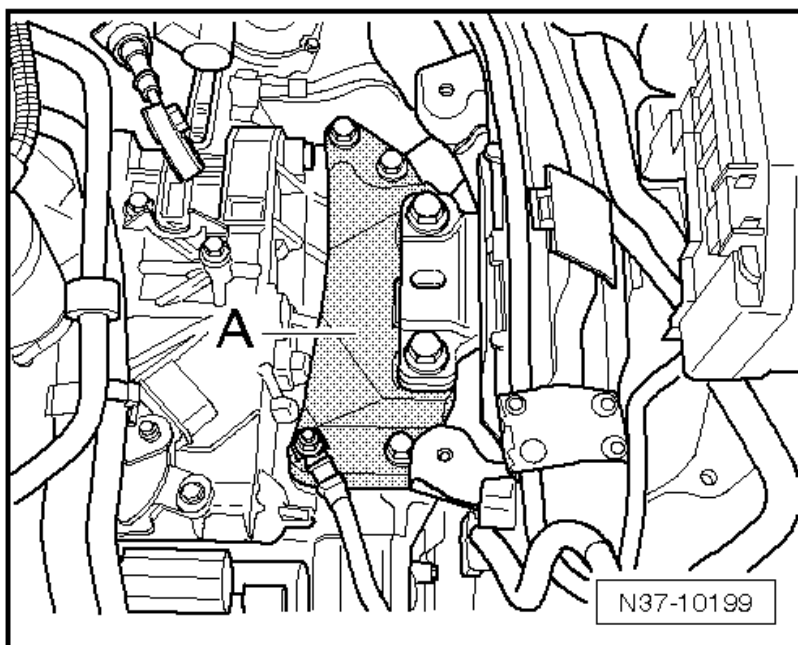
Transmission Code Letters, Reading



The transmission code letters can be found on the transmission near the selector lever cable (➡) or under the transmission mount bracket.

Direct Shift Trans.,
(DSG) – 02E

Transmission Code Letters, Reading (cont'd)



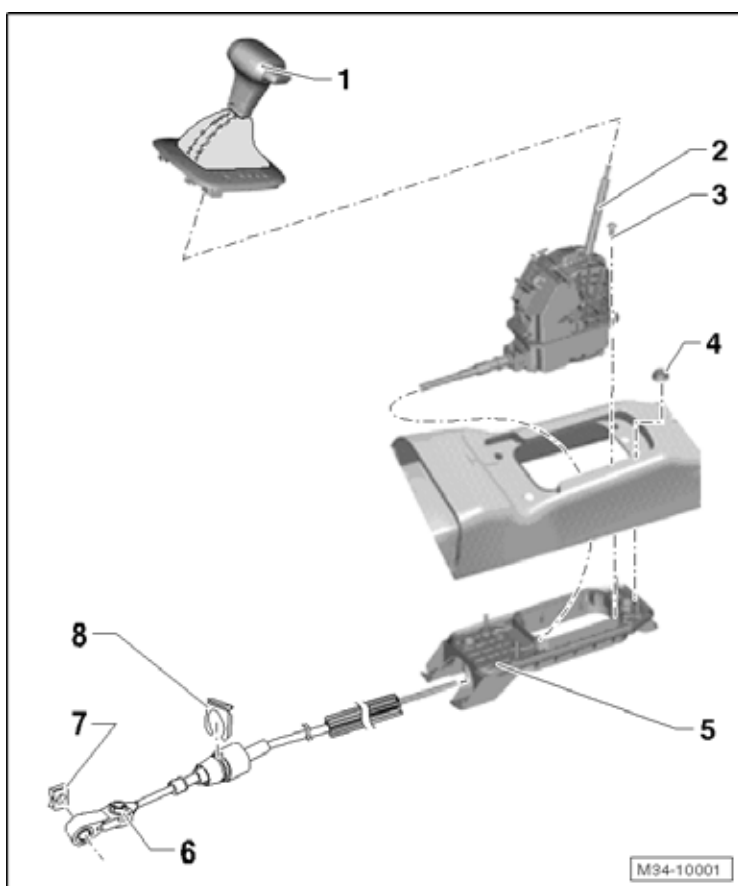
To read the transmission code letters under the transmission mount bracket, the engine and transmission must be supported and the transmission mount bracket (A) removed. Refer to ElsaWeb for the transmission mount bracket (A) removal procedure.

Transmission Allocation Codes

Direct Shift Gearbox (DSG) 02E	
KCU, KMX, KQC, LQV, LTE, MFL, MSV, NJK, MSV and NLP	HBQ, HUT, HXW, JPP, KCZ, KNC, KPV, LQZ, LTL, MSX, NJM and NLQ
2.0L - 103 kW TDI	2.0L - 147 kW TFSI

Controls, Housing (DSG) – 02E

Selector Mechanism Overview



- 1 - Shift Cover with Handle**
- 2 - Selector Mechanism with Selector Lever and Selector Lever Cable**
- 3 - Bolt**
 - ☐ 8 Nm
- 4 - Nut with Collar**
 - ☐ 8 Nm
- 5 - Selector Housing**
- 6 - Adjusting Screw**
 - ☐ 13 Nm
- 7 - Locking Washer**
 - ☐ Always replace after removing
- 8 - Locking Plate**
 - ☐ Always replace after removing

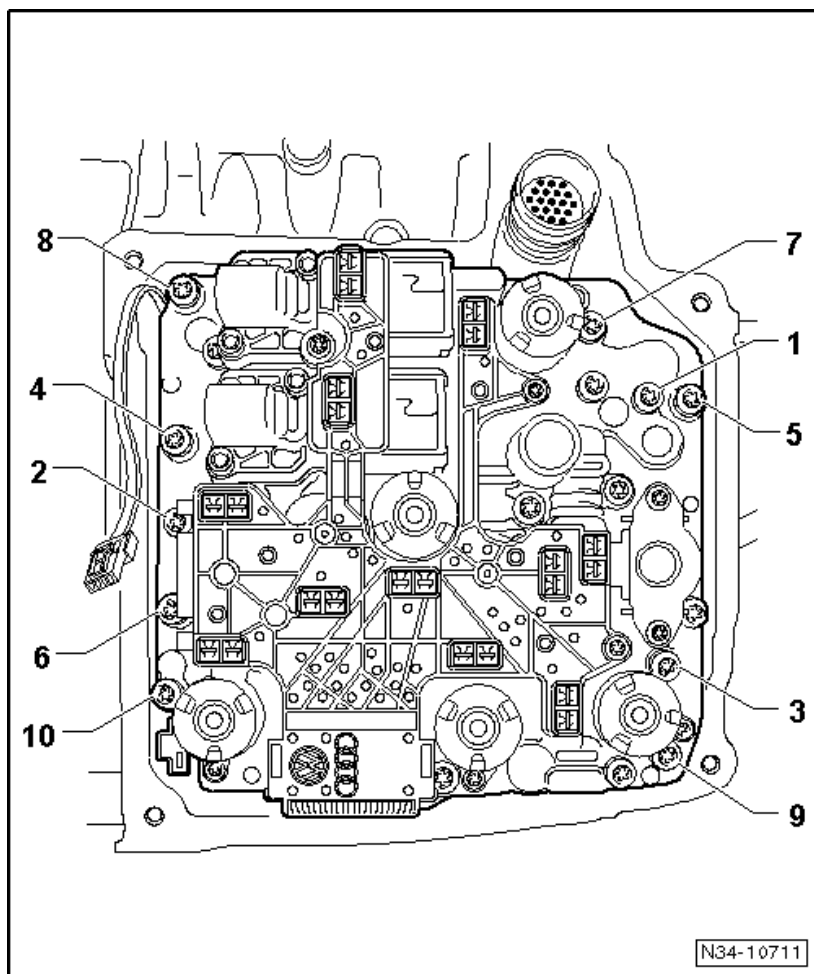
Direct Shift Trans.,
(DSG) – 02E

Fastener Tightening Specifications

Component	Nm
Drain plug to transmission	45
Mechatronic (large) cover bolt ¹⁾	10
Oil filter housing	20
Oil pump (small) cover bolt ¹⁾	8
Overflow tube to transmission	3
Selector housing to body nut	8
Selector lever cable adjusting bolt	13
Selector mechanism with selector lever and selector lever cable to body bolt	8
Selector shaft lever nut	20
Transmission fluid cooler to transmission bolt	20 plus an additional 90° (¼ turn)
Transmission input speed and clutch oil temperature sensor bolt	10
Wire bracket to mechatronic (large) cover nut	10

¹⁾ Tighten the bolts diagonally in multiple stages.

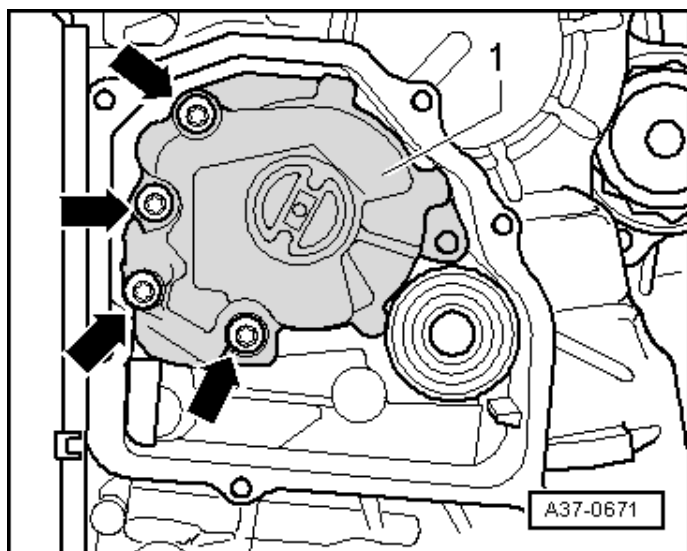
Mechatronic Tightening Specifications



Stage	Bolts	Tightening specification
1	Tighten bolts 1 through 10 in sequence	Install all the way in by hand.
2	Tighten bolts 1 through 10 in sequence	5 Nm
3	Tighten bolts 1 through 10 in sequence	Then tighten them an addition 90° (1/4) turn

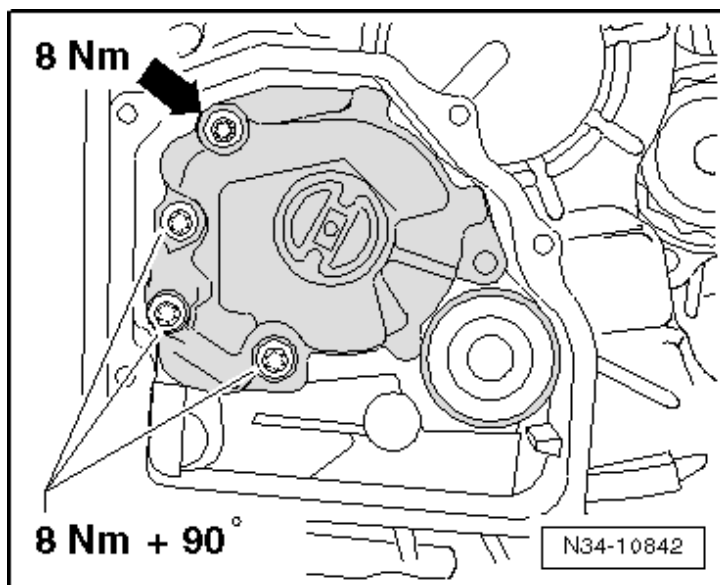
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Oil Pump Tightening Specifications



Without countersunk bolt

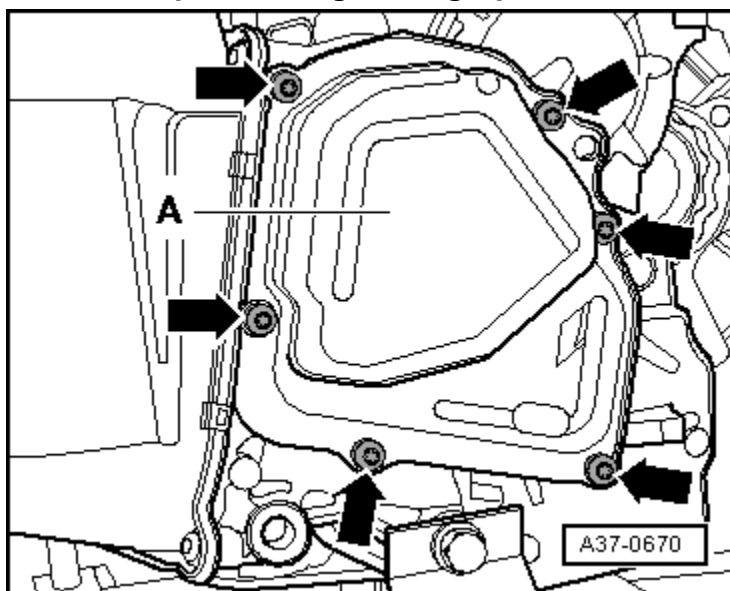
Component	Nm
Oil pump bolts ➡ with flat heads	5 plus an additional 90° (¼ turn)



With countersunk bolt

Component	Nm
Oil pump countersunk bolt	8
3 remaining oil pump bolts	8 plus an additional 90° (¼ turn)

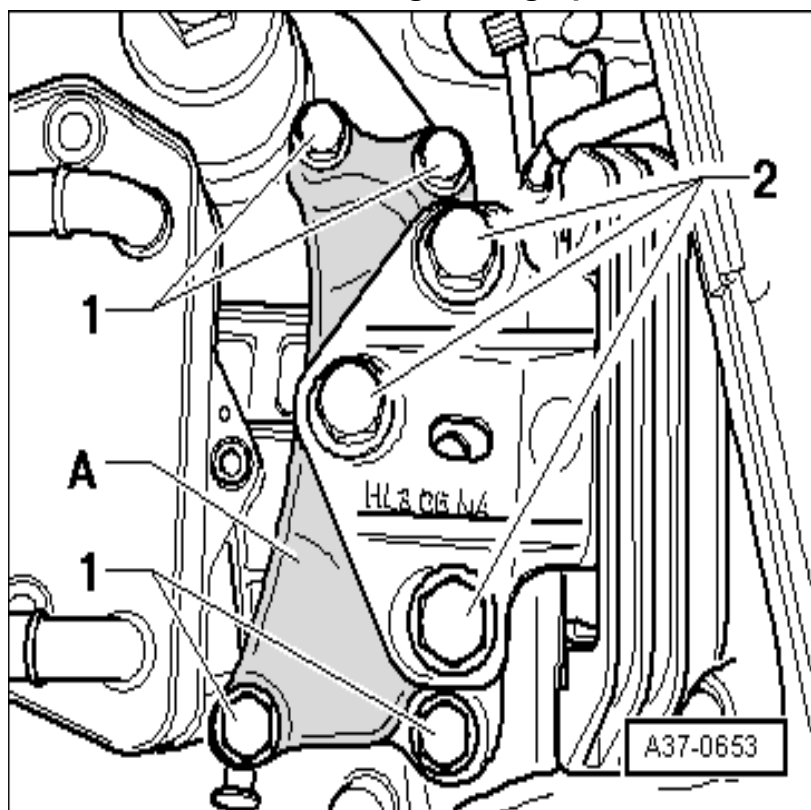
Oil Pump Cover Tightening Specifications



Component	Nm
Tighten bolts ➡ in a diagonal sequence in several steps (replace bolts)	8

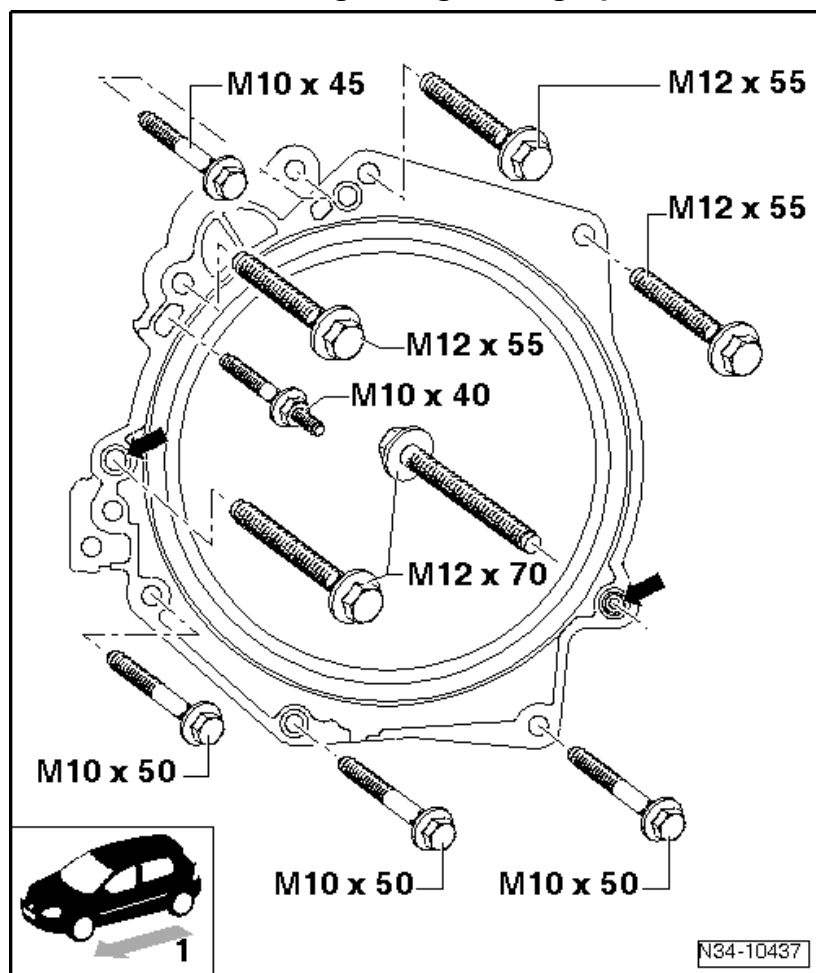
Direct Shift Trans.,
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Transmission Mount Tightening Specifications



Bolt	Component	Nm
1 and 2	Install all new bolts and tighten	Hand-tighten
1	Transmission mount-to-body	40 plus an additional 90° (¼ turn)
2	Transmission mount-to-transmission support	60 plus an additional 90° (¼ turn)

Transmission to Engine Tightening Specifications



Direct Shift Trans.,
(DSG) – 02E

Component	Fastener Size	Nm
Bolts	M12	80 or 65 if using T10179
Bolts	M10	40
Alignment pins ➔ for centering		