

Technical training.
Product information.

G30 Powertrain



BMW Service

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General information

Symbols used

The following symbol is used in this document to facilitate better comprehension or to draw attention to very important information:



Contains important safety information and information that needs to be observed strictly in order to guarantee the smooth operation of the system.

Information status and national-market versions

BMW Group vehicles meet the requirements of the highest safety and quality standards. Changes in requirements for environmental protection, customer benefits and design render necessary continuous development of systems and components. Consequently, there may be discrepancies between the contents of this document and the vehicles available in the training course.

This document basically relates to the European version of left hand drive vehicles. Some operating elements or components are arranged differently in right-hand drive vehicles than shown in the graphics in this document. Further differences may arise as the result of the equipment specification in specific markets or countries.

Additional sources of information

Further information on the individual topics can be found in the following:

- Owner's Handbook
- Integrated Service Technical Application.

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The information contained in this document forms an integral part of the BMW Group Technical Qualification and is intended for the trainer and participants in the seminar. Refer to the latest relevant information systems of the BMW Group for any changes/additions to the technical data.

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Technical training.

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1. Introduction

The development code for the new 7th generation BMW 5 Series is G30. The G30 will be available from SOP November 2016 and retail in early 2017.

1.1. History



Historical overview of the BMW 5 Series

Index	Development code
1	E12 (1972–1981)
2	E28 (1981–1987)
3	E34 (1987–1995)
4	E39 (1995–2003)
5	E60/E61 (2003–2010)
6	F10/F11 (2010–2016)
7	G30 (SOP late 2016 as 2017 MY)

1.2. Overview of system descriptions

Many of the systems used are already known from the current BMW 7 Series G12. The “Comparison of G12 with G30” chapter lists the common elements and the differences. The explanations of the systems already familiar from the G12 are kept brief. The system descriptions can be reviewed from the various technical reference manual’s listed below.

Topic	Technical Reference Manual
Drive variant 530i and 530i xDrive	ST1512 B46 engine
Drive variant 540i and 540i xDrive	ST1505 B58 engine
Drive variant M550i xDrive	ST1511 N63TU2 Engine
Air intake duct	ST1501 G12 Powertrain
Exhaust emissions regulations	ST1501 G12 Powertrain
Engine cooling	ST1512 B46 engine, ST1505 B58 engine, ST1511 N63TU2 engine
Engine control unit	ST1501 G12 Powertrain

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1. Introduction

Topic	Technical Reference Manual
Automatic engine start/stop function	ST1501 G12 Powertrain
Automatic transmission 8HPTU	ST1501 G12 Powertrain
xDrive	ST1501 G12 Powertrain

1.3. Drive comparison G12 with G30

Many G30 systems have already been introduced in the G12. The following table provides an overview of the differences and common features between the two series.

Engines	G12	G30
B46 Engine (4-cylinder gasoline engine)	—	●
B58 Engine (6-cylinder gasoline engine)	●	●
N63TU2 Engine (8-cylinder gasoline engine)	●	●

Systems/components	G12	G30
Electrical exhaust flap(s)	●	●
8th generation DME	●	●
Active air-flap control with two servomotors	●	●
Automatic transmission 8HPTU	●	●
Transfer box ATC13-1	●	●

1.4. Engine designation

The engine designation is used to uniquely identify the various engines. The following table provides an overview of the composition of the different engine codes.

Position	Meaning	Index	Explanation
1	Engine developer	M, N, B P S W	BMW Group BMW M Sport BMW M GmbH Bought-in engines
2	Engine type	3 4 5 6 7	3-cylinder in-line engine (e.g. B38) 4-cylinder in-line engine (e.g. B48, B46) 6-cylinder in-line engine (e.g. B58) V8 engine (e.g. N63) V12 engine (e.g. N74)
3	Change to the basic engine concept	0 1 – 9	Basic engine Changes, e.g. combustion process

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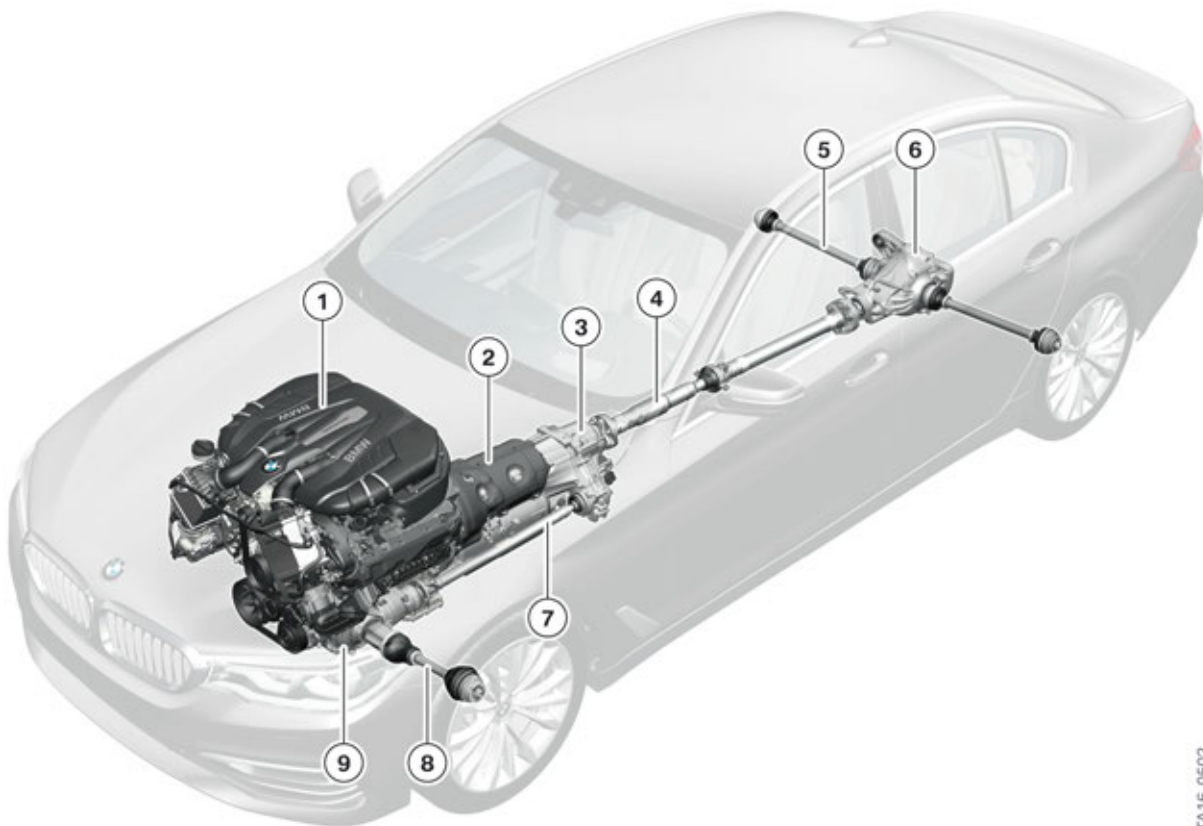
1. Introduction

Position	Meaning	Index	Explanation
4	Working method or fuel type and possibly installation position	A	Gasoline, transverse mounted
		B	Gasoline, longitudinally mounted
		C	Diesel, transverse mounted
		D	Diesel, longitudinally mounted
		H	Hydrogen
		K	Gasoline, horizontal mounting
5 + 6	Displacement in 1/10 liter	12	1.2 l
		15	1.5 l
		20	2.0 l
		30	3.0 l
		40	4.0 l
		44	4.4 l
7	Performance class	60	6.0 l
		K	Lowest
		U	Lower
		M	Middle
		O	Upper
		T	Top
8	Revision relevant to approval	S	Super
		0	New development
		1 – 9	Redesign

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2. Drive Variants

Like in the predecessor, the G30 is offered with optional xDrive all-wheel drive. All models receive the 8-speed Sport automatic transmission as standard.



TA16-0502

Drive overview G30

Index	Explanation
1	Engine
2	Automatic transmission
3	Transfer box VTG (only for xDrive)
4	Prop shaft
5	Output shaft, rear
6	Rear axle differential
7	Front drive shaft (only for xDrive)
8	Front output shaft (only for xDrive)
9	Front axle differential (only for xDrive)

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2. Drive Variants

2.1. Models

With the exception of the 8-cylinder gasoline engine (N63TU2), which has had an engineering upgrade, the newly-developed modular engines are used. All engines meet the ULEV II or SULEV regulations for the US.

- ULEV II = Ultra-Low Emission Vehicle
- SULEV = Super Ultra-Low Emission Vehicle

2.1.1. G30 models

G30	Engine	sDrive	xDrive	Sport Automatic transmission	Manual gearbox
530i	4-cylinder engine	●	●	●	—
540i	6-cylinder engine	●	●	●	—
M550i	8-cylinder engine	—	●	●	—

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3. Gasoline Engines

The engines of the G30 are already known from the BMW 7 Series G12. The following table shows the common features and differences in terms of power and torque specifications in the various performance classes:

Engine	G12		G30	
B46 4-cylinder gasoline engine	740e*	190 kW (258 HP) 400 Nm (295 lb-ft)	530i	185 kW (248 HP) 350 Nm (258 lb-ft)
B58 6-cylinder gasoline engine	740i	240 kW (326 HP) 450 Nm (332 lb-ft)	540i	250 kW (335 HP) 450 Nm (332 lb-ft)
N63 8-cylinder gasoline engine	750i	330 kW (445 HP) 650 Nm (480 lb-ft)	M550i	340 kW (455 HP) 650 Nm (480 lb-ft)

* G12 PHEV iPerformance vehicle with modified B48 engine

3.1. Technical data

	530i	540i	M550i
Engine designation	B46B20O0	B58B30M0	N63B44O2
Power output	185 kW (248 HP)	250 kW (335 HP)	340 kW (455 HP)
Torque	350 Nm (258 lb-ft)	450 Nm (332 lb-ft)	650 Nm (480 lb-ft)
Exhaust emission standards	SULEV	ULEV II	ULEV II
Automatic transmission	8HP50	8HP50	8HP75

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3. Gasoline Engines

3.2. Technical data BMW 530i engine



TA16-0518

B46B2000 engine in the G30

Parameters	Unit	B46B2000
Displacement	cm ³	1998
Cylinder layout	—	In-line
Number of cylinders	—	4
Firing order	—	1–3–4–2
Bore	mm	82
Stroke	mm	94.6
Compression ratio	ϵ	10.2
Combustion process	—	Turbo-Valvetronic direct injection
Permitted fuel	ROZ95	91–100
Oil quantity	liters	5.25

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3. Gasoline Engines

3.2.1. Engine highlights B46B2000

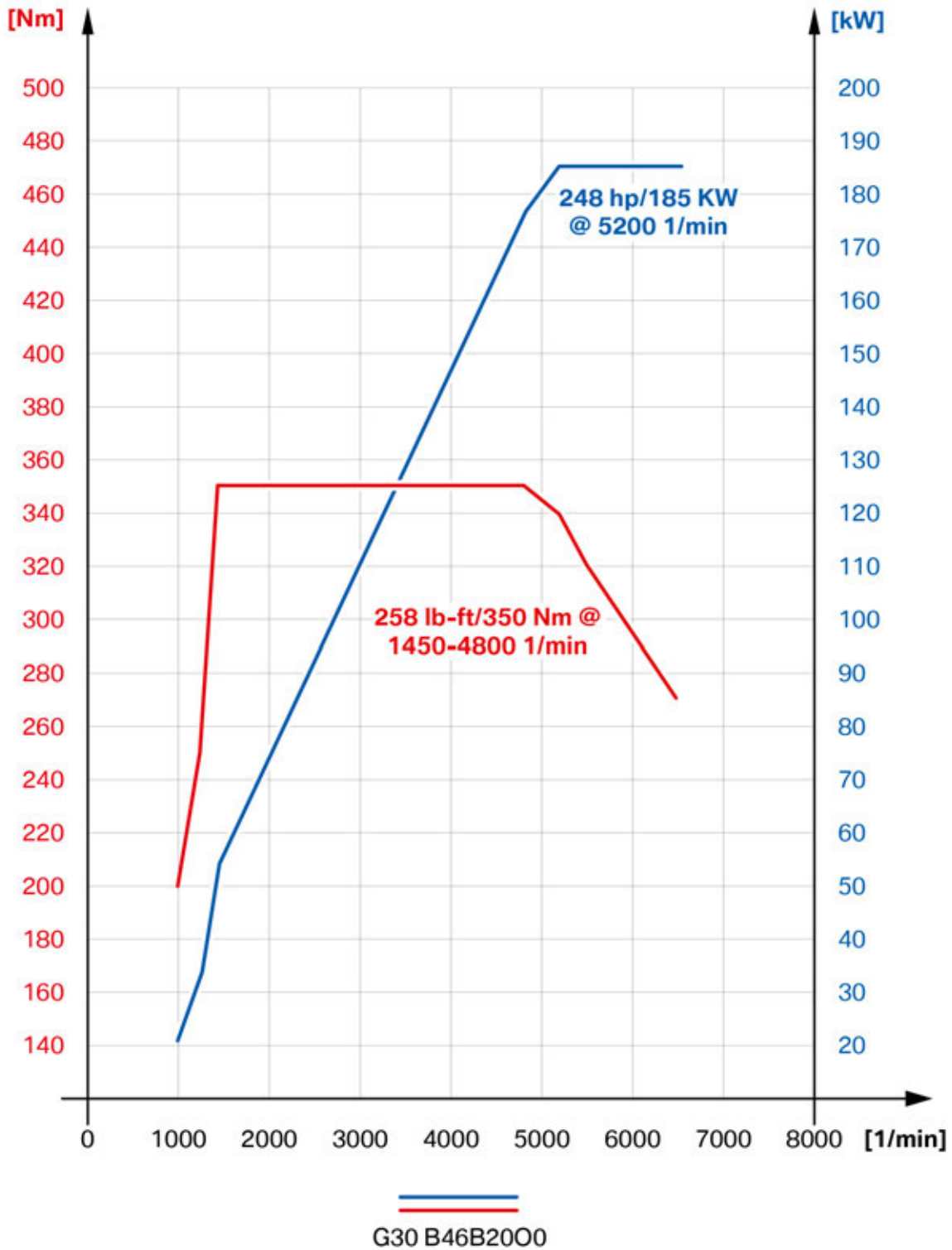
List of the most important special features:

- 1 Direct rail injection system with 200 bar pressure.
- 2 4th generation Valvetronic.
- 3 Twin-scroll turbocharger with electrical wastegate valve controller.
- 4 Intake air system with integrated charge air cooler.
- 5 Switchable coolant pump.
- 6 Heat management module.
- 7 Characteristic map-controlled oil pump with integrated vacuum pump.

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3. Gasoline Engines

3.2.2. Full load diagram



Full load diagram B46B2000 engine

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3. Gasoline Engines

3.3. BMW 540i engine technical data



TA15-0553

B58B30M0 engine in the G30

Parameters	Unit	B58B30M0
Displacement	cm ³	2998
Cylinder layout	—	In-line
Number of cylinders	—	6
Firing order	—	1–5–3–6–2–4
Bore	mm	82
Stroke	mm	94.6
Compression ratio	ϵ	11
Combustion method	—	Turbo-Valvetronic direct injection
Permitted fuel	RONZ95	91–100
Oil quantity	liters	6.5

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3. Gasoline Engines

3.3.1. Engine highlights B58B30M0

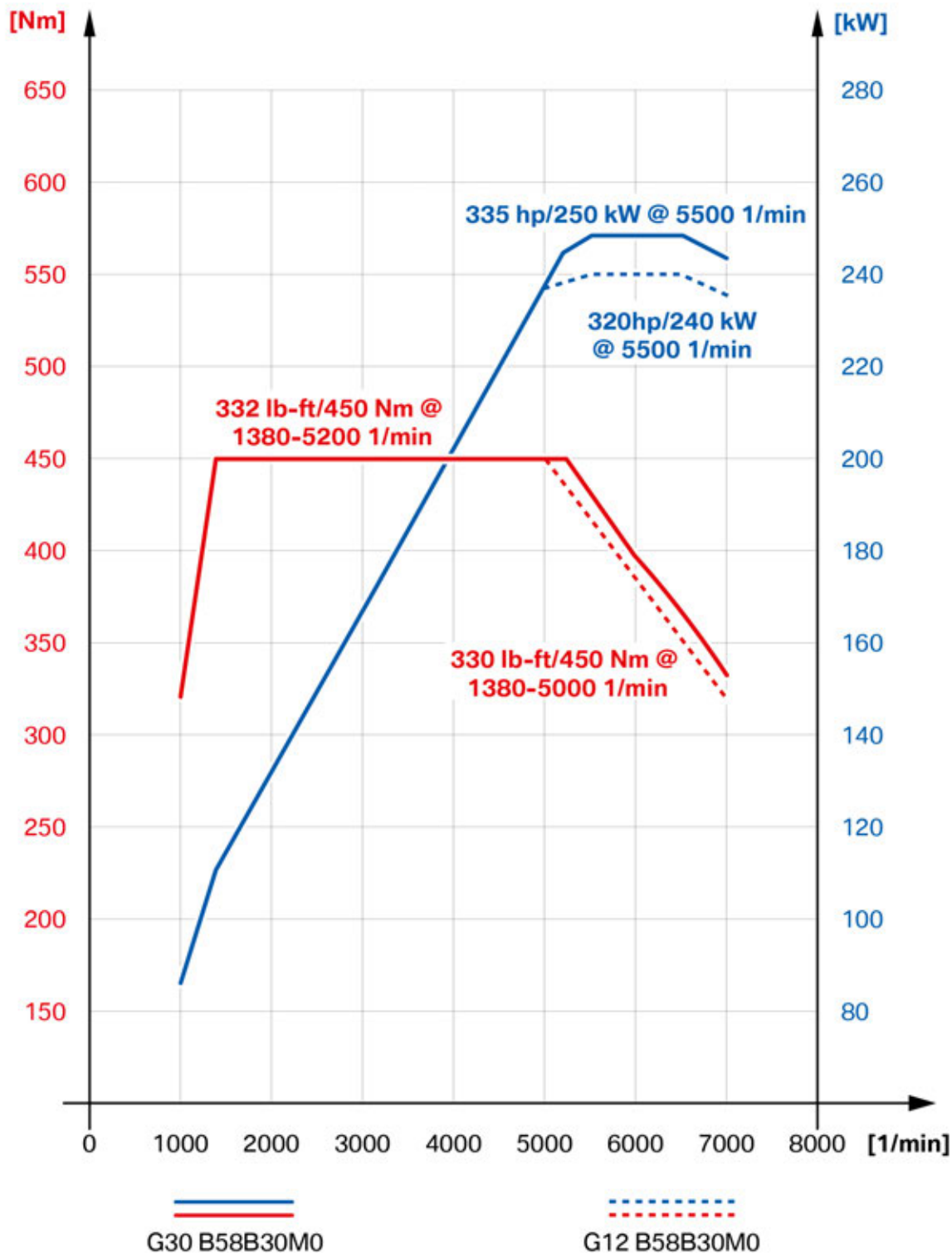
List of the most important special features:

- 1 Direct rail injection system with 200 bar pressure.
- 2 Valvetronic 4th generation.
- 3 Heat management module.
- 4 Intake air system with integrated charge air cooler.
- 5 Twin-scroll turbocharger with electrical wastegate valve controller.
- 6 Exhaust manifold with expansion compensation elements.
- 7 Characteristic map-controlled oil pump with integrated vacuum pump.
- 8 8th generation Digital Motor Electronics (DME).

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3. Gasoline Engines

3.3.2. Full load diagram



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Full load diagram B58B30M0 engine

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3. Gasoline Engines

3.4. BMW M550i engine technical data



TA15-0632

N63TU2 engine in the G30

Parameters	Unit	N63B44O2
Displacement	cm ³	4395
Cylinder layout	—	V-engine
Number of cylinders	—	8
Firing order	—	1-5-4-8-6-3-7-2
Bore	mm	89
Stroke	mm	88.3
Compression ratio	ϵ	10.5
Combustion process	—	Turbo-Valvetronic direct injection
Permitted fuel	RONZ95	91-98
Oil quantity	liters	10

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3. Gasoline Engines

3.4.1. Engine highlights N63B44O2

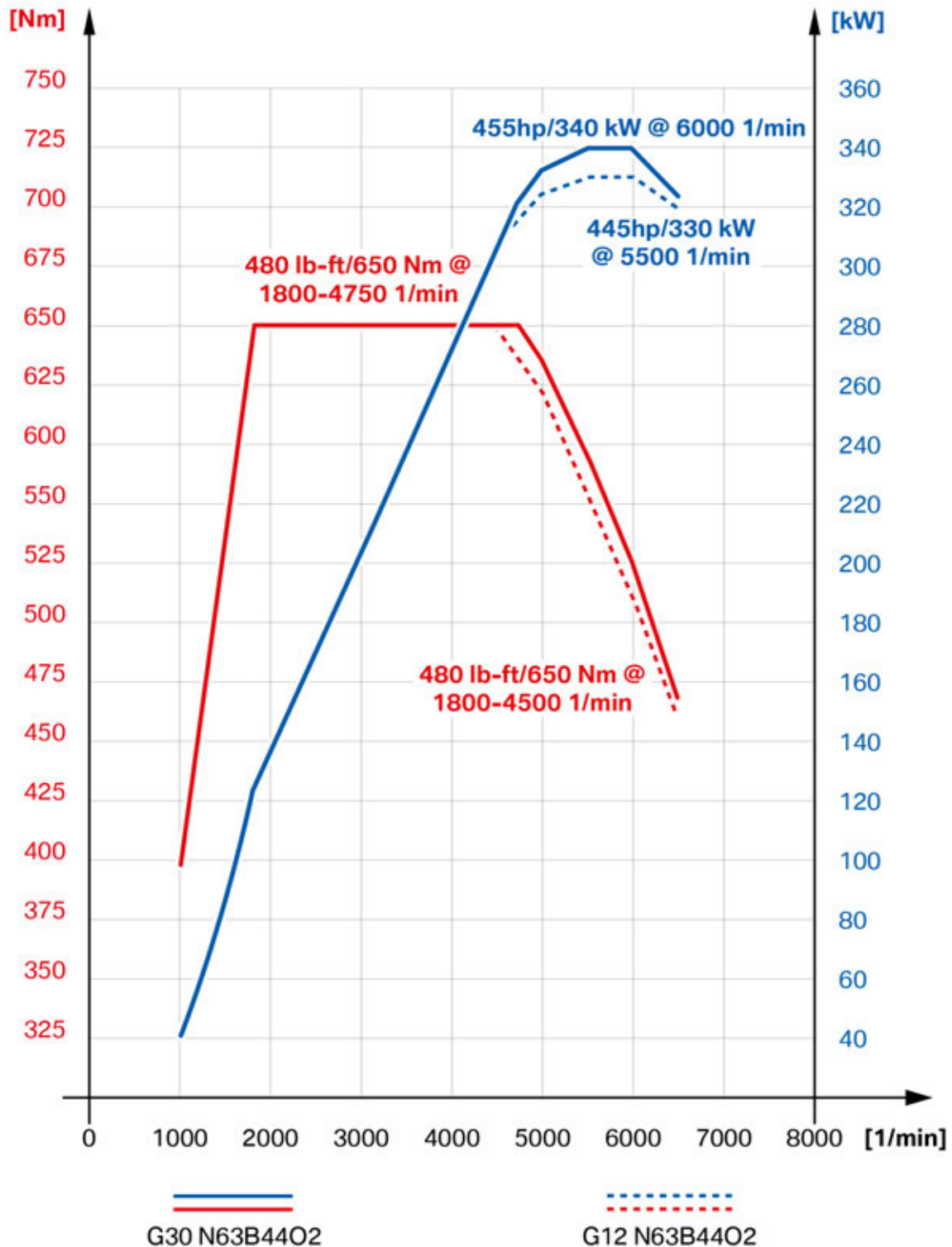
List of the most important special features:

- 1 Map-controlled oil pump.
- 2 Engine temperature management Split-Cooling-Combined (SCC).
- 3 Engine oil/coolant heat exchanger integrated in the v-space.
- 4 New coolant-cooled 8th generation Digital Motor Electronics (DME).

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3. Gasoline Engines

3.4.2. Full load diagram



Full load diagram N63B44O2 engine

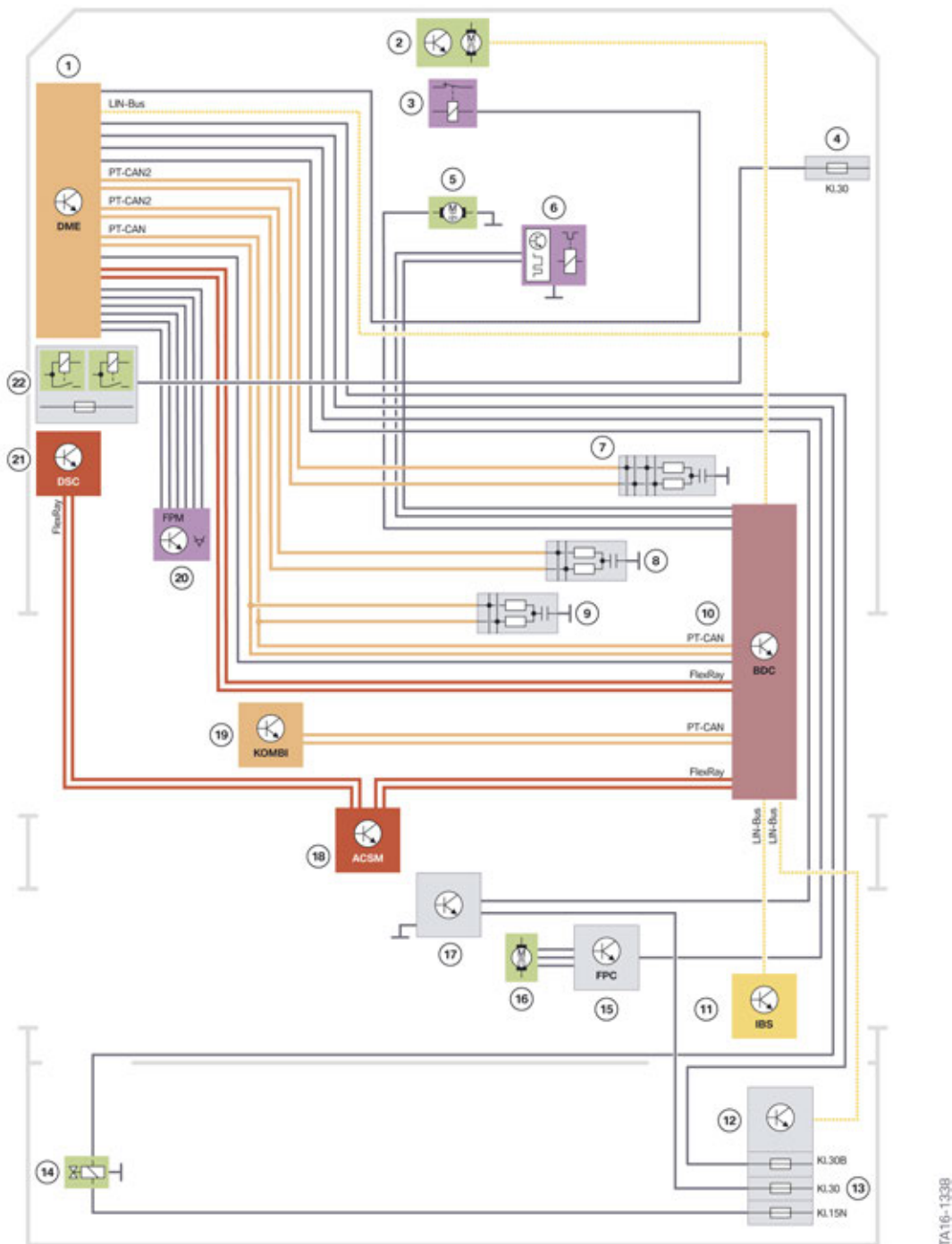
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3. Gasoline Engines

3.5. System wiring diagram

3.5.1. B46/B58 Engine



System wiring diagram B68/B58 engine in G30

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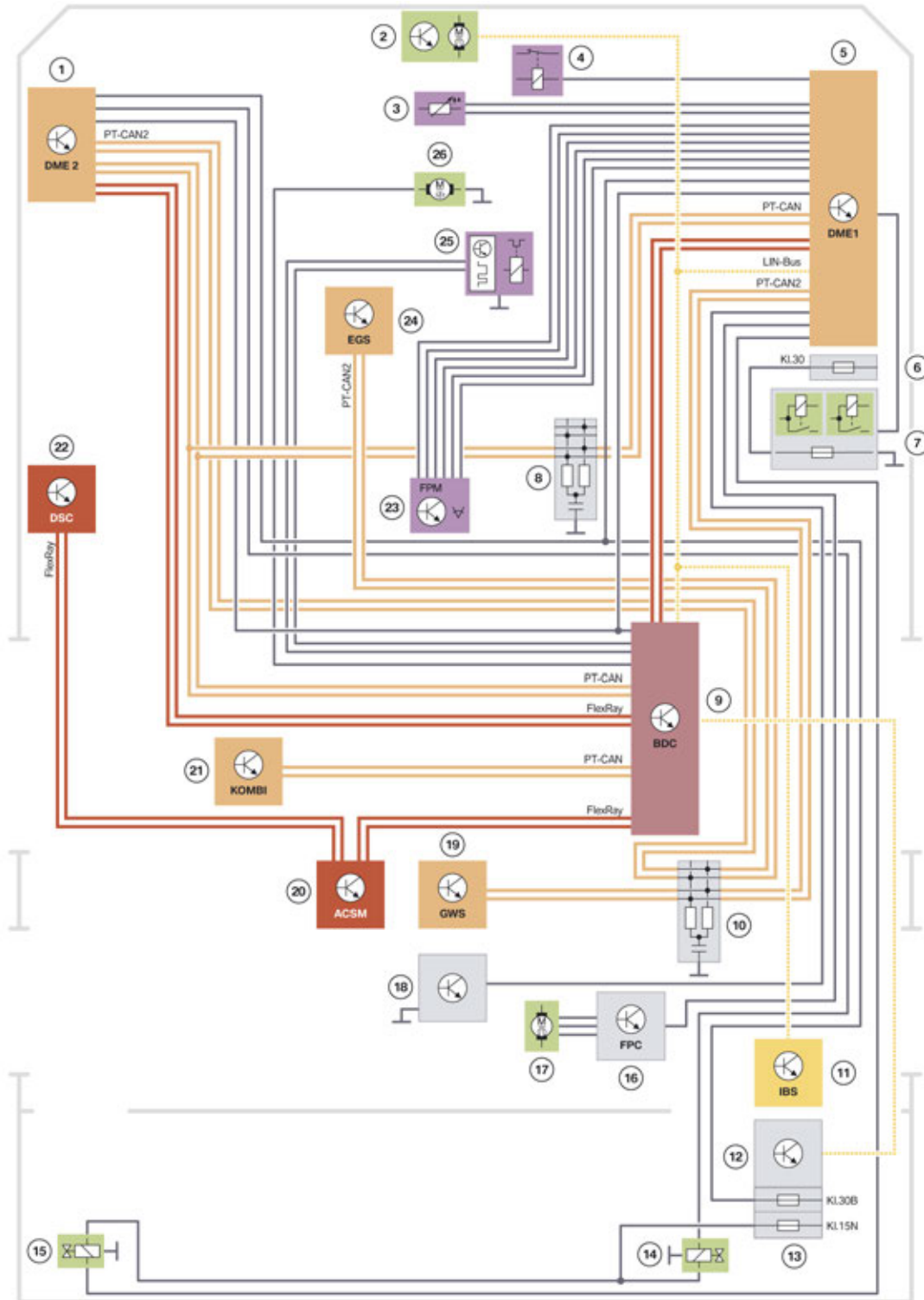
3. Gasoline Engines

Index	Explanation
1	Digital Motor Electronics (DME)
2	Electric fan
3	Relay for electric fan
4	Power distribution box, engine compartment
5	Pinion starter
6	Air conditioning compressor
7	CAN terminator 6
8	CAN terminator 5
9	CAN terminator 4
10	Body Domain Controller (BDC)
11	Intelligent Battery Sensor (IBS)
12	LIN interface
13	Rear right power distribution box
14	Electrical exhaust flap
15	Fuel Pump Control (FPC)
16	Electric fuel pump
17	Tank leak diagnosis (Natural Vacuum Leak Detection NVLD)
18	Advanced Crash Safety Module (ACSM)
19	Instrument panel (KOMBI)
20	Accelerator pedal module
21	Dynamic Stability Control (DSC)
22	Integrated supply module

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3. Gasoline Engines

3.5.2. N63TU2 Engine



TA16-1339

System wiring diagram N63TU2 engine in the G30

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3. Gasoline Engines

Index	Explanation
1	Digital Motor Electronics (DME) 2
2	Electric fan
3	Temperature sensor
4	Relay for electric fan
5	Digital Motor Electronics (DME)1
6	Power distribution box, engine compartment
7	Integrated supply module
8	CAN terminator 4
9	Body Domain Controller (BDC)
10	CAN terminator 5
11	Intelligent Battery Sensor (IBS)
12	LIN interface
13	Rear right power distribution box
14	Electrical exhaust flap, right
15	Electrical exhaust flap, left
16	Fuel Pump Control (FPC)
17	Electric fuel pump
18	Tank leak diagnosis (Natural Vacuum Leak Detection NVLD)
19	Gear selector switch (GWS)
20	Advanced Crash Safety Module (ASCM)
21	Instrument panel (KOMBI)
22	Dynamic Stability Control (DSC)
23	Accelerator pedal module
24	Electronic transmission control (EGS)
25	Air conditioning compressor
26	Pinion starter

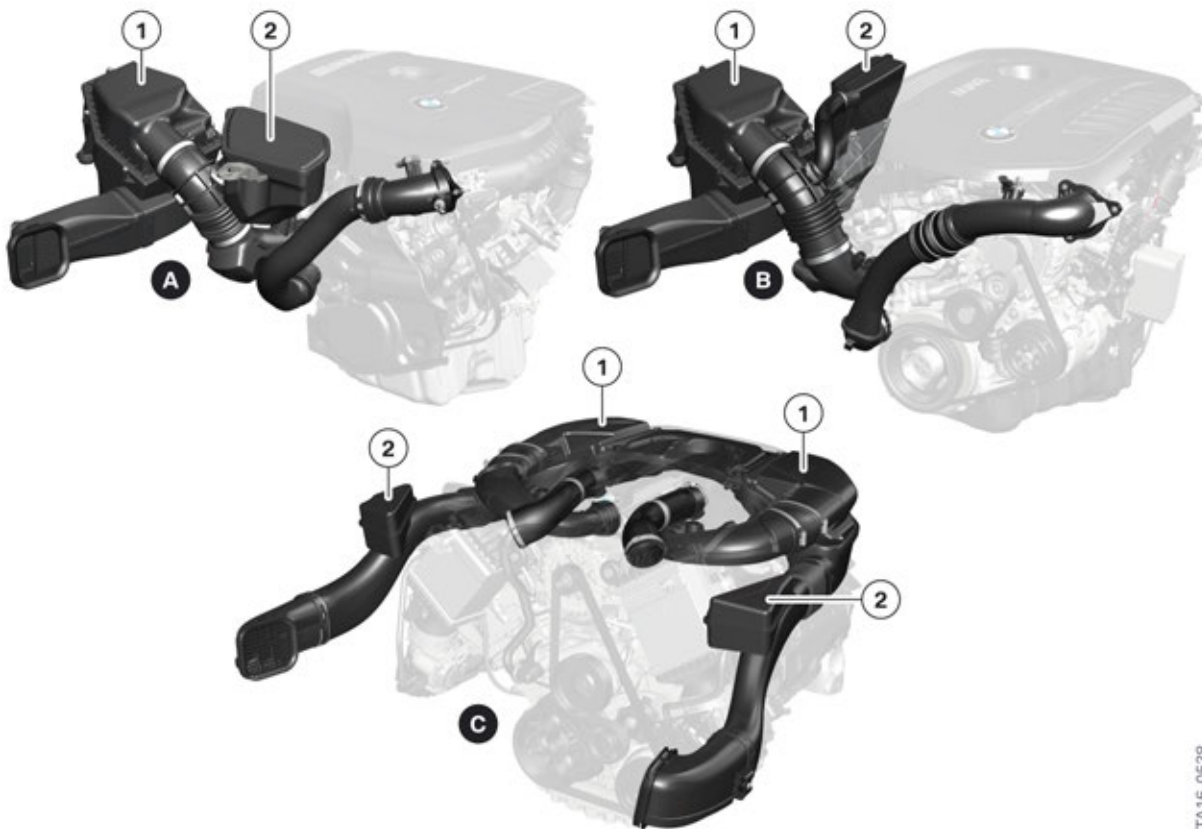
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3. Gasoline Engines

3.6. Air intake and exhaust emission systems

3.6.1. Air intake duct

In contrast to the 4- and 6-cylinder gasoline engines, the 8-cylinder gasoline engine has a two-branch intake system. This ensures that the necessary air volume is made available to the engine in every load range.



TA16-0538

Gasoline engine air intake duct in the G30

Index	Explanation
A	B46 engine
B	B58 Engine
C	N63TU2 Engine
1	Intake silencer
2	Resonator

Resonator

The pulsating gas exchange noise of the reciprocating engine is damped in the air intake duct. Helmholtz resonators are technical solutions for achieving the maximum air duct cross-section and minimum packaging space volume vehicle-specific damping specifications.

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3. Gasoline Engines

3.6.2. Hot film air mass meter

The intake air mass is filtered in all engines via an 8th generation hot film air mass meter.

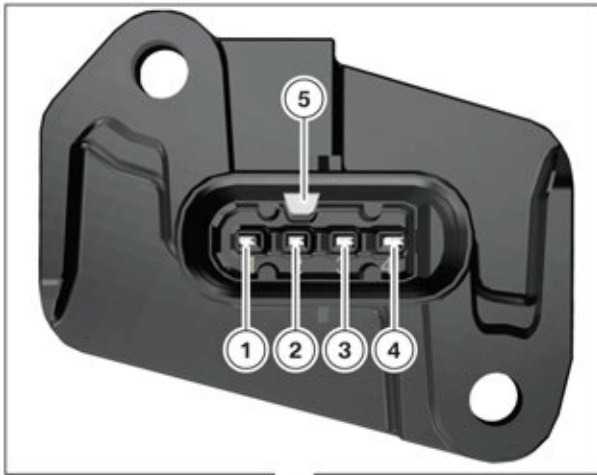
The hot film air mass meter has the following four electrical connections:

- Voltage supply (+)
- Ground (-)
- Sensor signal (SENT data protocol)
- Not assigned

A manipulation-proof SENT signal is available for data transfer.

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3. Gasoline Engines



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8th generation hot film air mass meter in the G30

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3. Gasoline Engines

Index	Explanation
1	Voltage supply (5 V)
2	Ground connection
3	Sensor signal (SENT protocol)
4	Not assigned
5	Connector encoding

The 8th generation hot film air mass meter has a specific electric connector, this is so it cannot be swapped between the various engine versions.

The following table provides an overview of the various sensor generations in the gasoline engine.

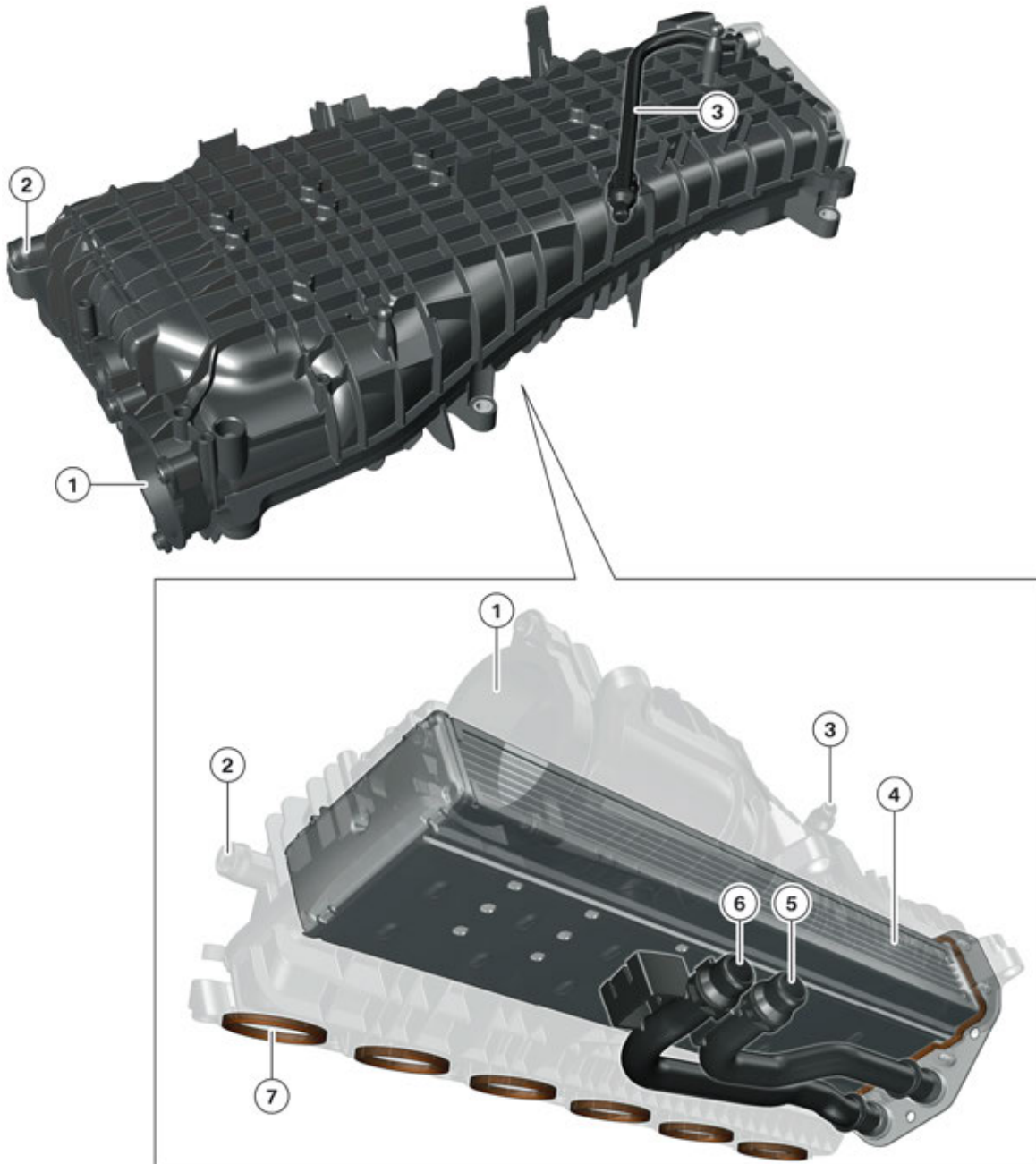
	Hot film air mass meter 7	Hot film air mass meter 8
Manufacturer	Bosch	Bosch
Sensor type	Hot film	Hot film
Voltage supply	12 V	5 V
Signal shape	Pulse-width modulated signal	SENT data protocol
Insert	B46, N63TU	B46, B58, N63TU2 In combination with DME 8.x.x
Connections	4 - 12 V - Ground - Intake air temperature - PWM signal (air mass)	3 - 5 V - Ground - SENT data protocol (air mass/intake air temperature)

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3. Gasoline Engines

3.6.3. Charge air cooling

All gasoline engines are equipped with indirect charge air cooling.



TO15-0012

Intake system with integrated, indirect charge air cooler using the example of the B58 engine

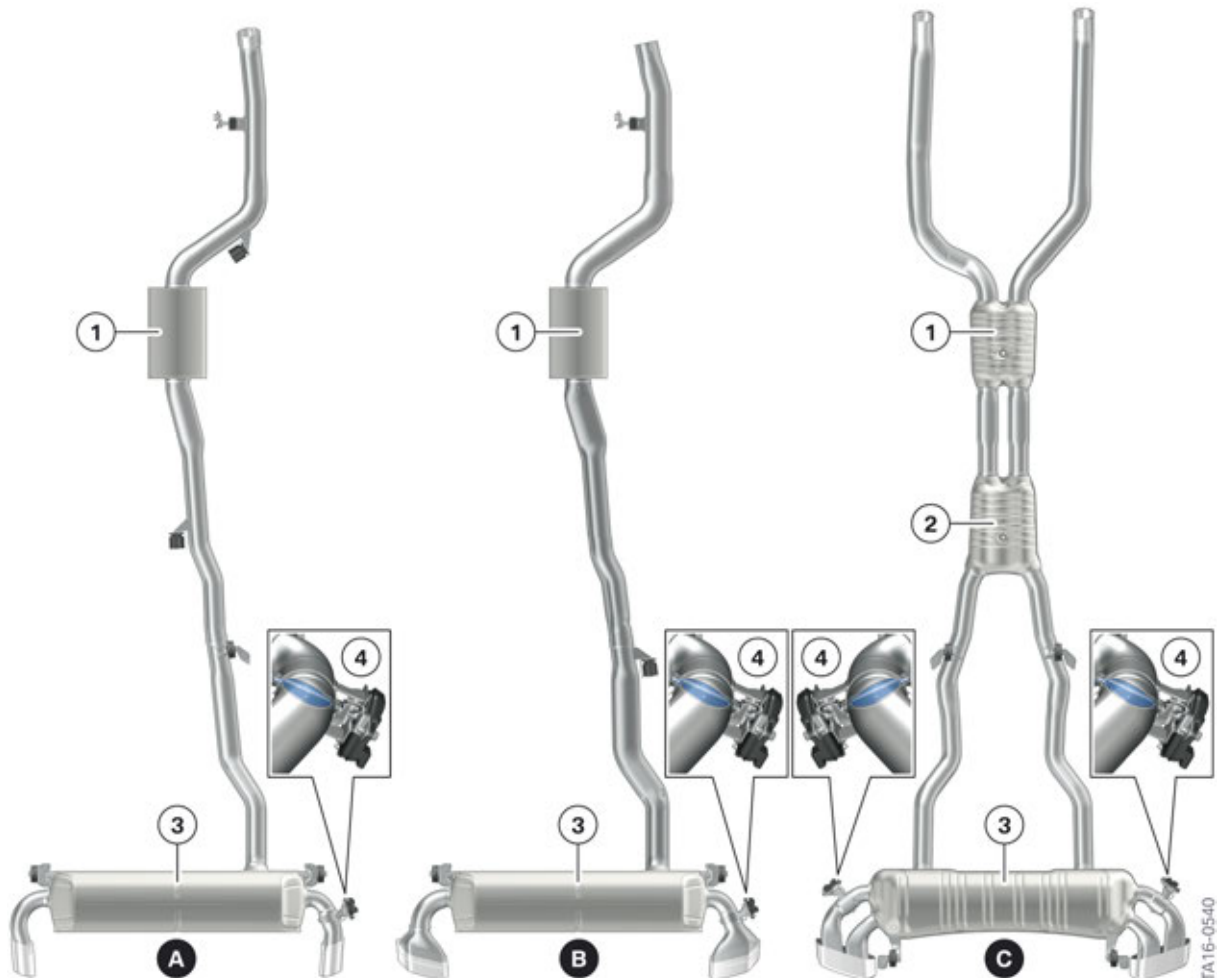
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3. Gasoline Engines

Index	Explanation
1	Throttle valve fixture
2	Tank ventilation
3	Ventilation line to the expansion tank
4	Charge air cooler
5	Coolant return
6	Coolant supply
7	Cylinder head connection

3.6.4. Exhaust emission system

The 4- and 6-cylinder gasoline engines have an electrical exhaust flap on the right side. The 8-cylinder gasoline engines are equipped with two electrical exhaust flaps.



Overview of exhaust gas variants in the G30

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3. Gasoline Engines

Index	Explanation
A	BMW 530i
B	BMW 540i
C	BMW M550i
1	Front silencer
2	Center silencer
3	Rear silencer
4	Electrical exhaust flap actuator

Tailpipe versions



Gasoline engine exhaust tailpipe variants in the G30

Index	Explanation
A	BMW 530i
B	BMW 540i
C	BMW M550i

BMW 530i models with optional equipment M sport package (OE 337) use the exhaust tailpipe version from figure B.

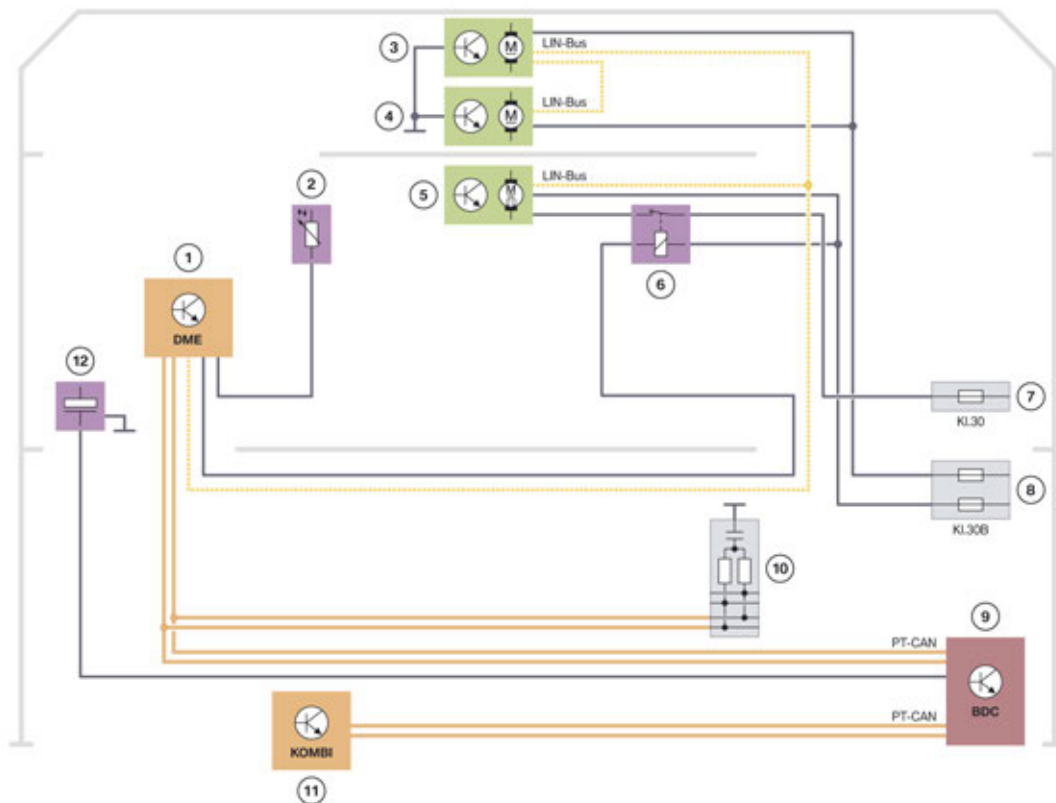
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4. Cooling

4.1. Active air flap control

It was possible to carry over the active air-flap control from the G12. The cooling surfaces at the front of the vehicle can be closed by means of two separate air flaps. This reduces the drag coefficient and thus saves fuel. A further advantage is faster heating up of the engine after a cold start.

4.1.1. System wiring diagram



Air flap control system wiring diagram in the G30

Index	Explanation
1	Engine control unit (DME)
2	Coolant temperature sensor
3	Active air-flap control, top
4	Active air-flap control, bottom
5	Electric fan
6	Relay for electric fan
7	Power distribution box, engine compartment
8	Power distribution box, front right

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4. Cooling

Index	Explanation
9	Body Domain Controller (BDC)
10	CAN terminator 4
11	KOMBI
12	Coolant level sensor

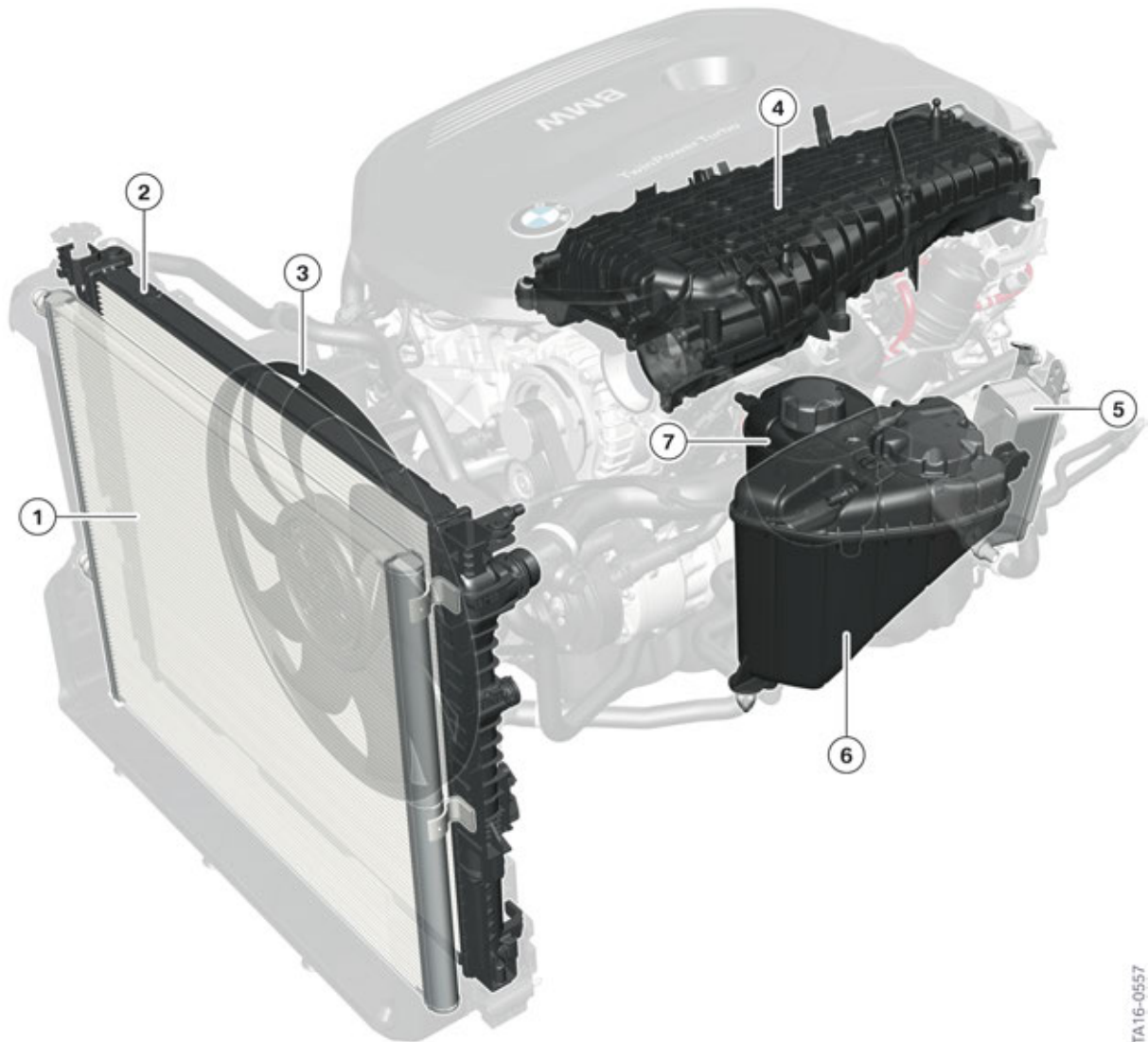
4.2. Gasoline engines

4.2.1. B468/B58 Engine

The B46/B58 engines have two separate coolant circuits. The coolant in the low-temperature coolant circuit to cool the charge air. The coolant in the high-temperature coolant circuit to cool the engine. The two coolant circuits each have their own expansion tank.

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4. Cooling



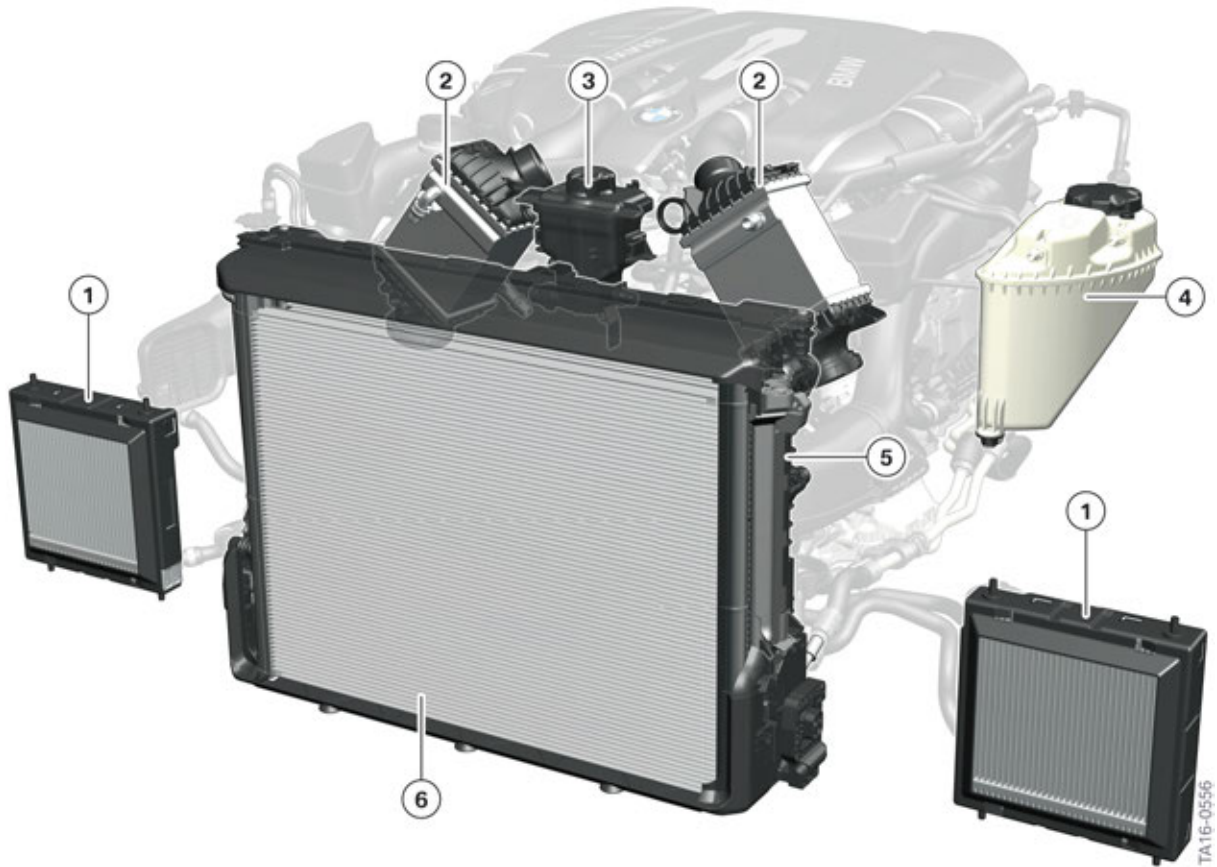
Overview of the components of the cooling system B46/B58 engine in the G30

Index	Explanation
1	Low-temperature radiator
2	High-temperature radiator
3	Fan
4	Charge air cooler (integrated in the intake pipe)
5	Transmission oil-to-coolant heat exchanger
6	Expansion tank, low-temperature circuit
7	Expansion tank, high-temperature circuit

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4. Cooling

4.2.2. N63TU2 Engine



Overview of the components of the cooling system N63TU2 engine in the G30

Index	Explanation
1	External radiator (high-temperature coolant circuit)
2	Charge air cooler (indirect charge air cooler)
3	Expansion tank, low-temperature circuit
4	Expansion tank, high-temperature circuit
5	Radiator high-temperature coolant circuit
6	Radiator low-temperature coolant circuit

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5. Fuel Supply

Index	Explanation
7	Rear right power distribution box
8	Carbon canister
9	Fuel Pump Control (FPC)
10	Fuel tank
11	Digital Motor Electronics (DME)
12	Emergency release
13	Fresh air filter
14	Tank leak diagnosis (NVLD)
15	Ventilation line, carbon canister
16	Tank ventilation line

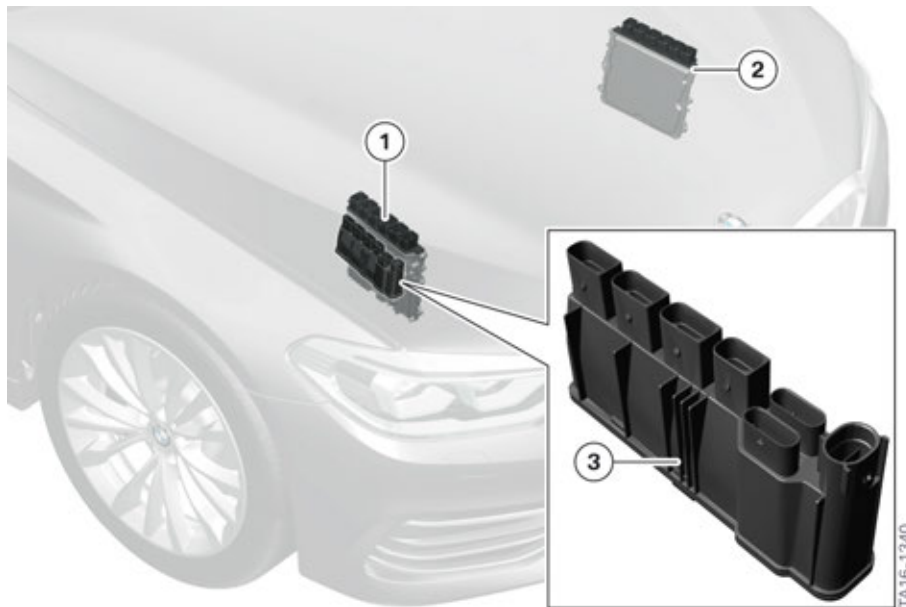
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6. Engine Electrical System

6.1. Engine control unit

The new 8th generation of Bosch engine control units already used in the G12 is used in the G30. Its appearance is characterized by a uniform housing and a uniform connector strip. However, the hardware inside has been adapted to the various applications.

Two engine control units are used for the N63TU2 engine. All other drive variants are equipped with one engine control unit. The integrated supply module is also on the engine control unit. It supplies the engine control units and various sensors and actuators with the required voltage supply.



Integrated supply module in the G30

Index	Explanation
1	Digital Motor Electronics 1
2	Digital Motor Electronics 2 (only for N63TU2 engine)
3	Integrated supply module

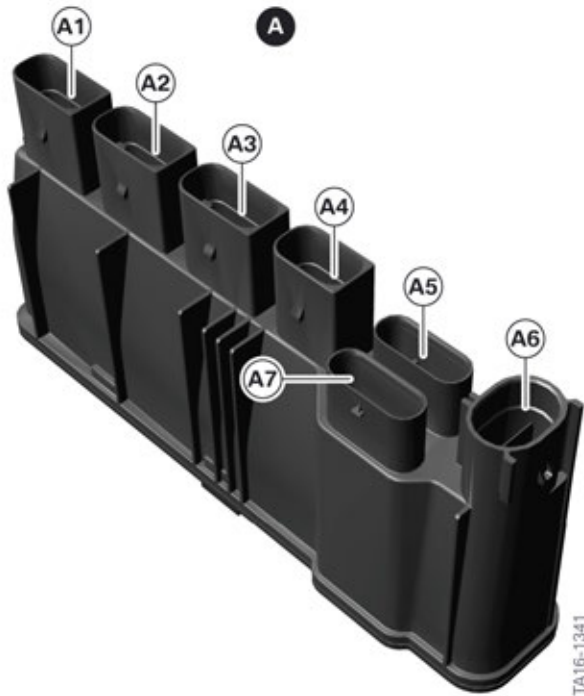
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6. Engine Electrical System

6.2. Integrated supply module

The integrated supply module supplies the engine control unit and some sensors and actuators with voltage.

Various integrated supply modules are used depending on the engine type and the series or V-engine design.



Integrated supply module in the G30

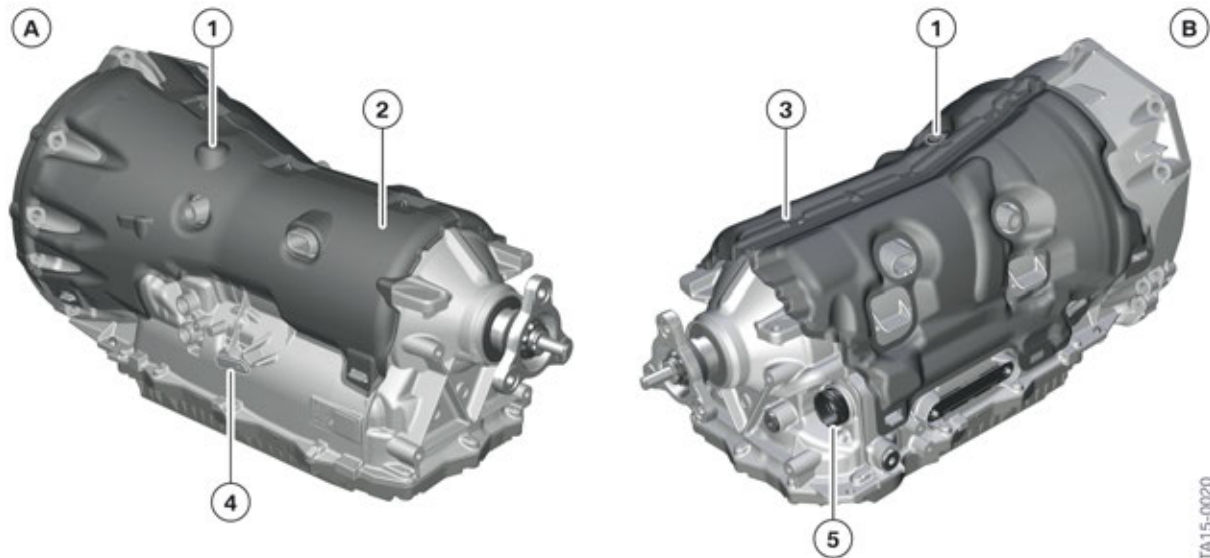
Index	Explanation
A	Gasoline engine
A1	Voltage supply of the actuators and sensors
A2	Voltage supply for actuators and sensors
A3	Actuation of relay for integrated supply module
A4	Voltage supply for oxygen sensors bank 2 (only for the N63)
A5	Voltage supply DME 1
A6	Voltage supply from engine compartment power distribution box
A7	Voltage supply DME 2

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7. Automatic Transmission

The revised 8HPTU automatic transmission, which is already known from the F23 (2 Series BMW convertible) and F85/F86 (BMW X5 M, BMW X6 M) and G12 is used in the G30.

The special features of the automatic transmission in the G30 are described in this document.



8HPTU automatic transmission with acoustics encapsulation in the G30

Index	Explanation
A	8HPTU for 6-cylinder engines
B	8HPTU for 8-cylinder engines
1	Transmission breather
2	Acoustic encapsulation (three-part)
3	Acoustic encapsulation (two-part)
4	Mechanism for emergency release
5	Electrical connection (mechatronics to vehicle electrical system)

7.1. Transmission variants

Different transmission variants are used depending on the engine installed.

Model	Engine	GA8HP50Z	GA8HP75Z
530i	4-cylinder engine (B46)	●	
540i	6-cylinder engine (B58)	●	
M550i	8-cylinder engine (N63TU2)		●

G30 Powertrain

7. Automatic Transmission

7.2. Highlights

The following further developments made it possible to increase the comfort, dynamics and efficiency of the revamped 8-speed automatic gearbox:

- Improved driving comfort through hot-end decoupling of the rotational imbalance of the engine by means of a centrifugal pendulum.
- Improved shifting comfort through slightly increased gear steps (2 modified planetary gear sets).
- Increased efficiency through optimum gear spread and gear stepping.
- Reduction of vehicle-specific insulation measures due to acoustic encapsulation on the transmission.
- Functional enhancements in the area of ConnectedShift.
- Enhanced customer experience due to new operating possibilities with the driving experience switch or shift paddles.

7.3. Designation

The following table provides an overview of the composition of the different transmission codes:

Position	Meaning	Index	Explanation
1	Designation	G	Transmission
2	Type of transmission	A	Automatic transmission
3	Number of gears	6 8	6 forward gears 8 forward gears

G30 Powertrain

7. Automatic Transmission

Position	Meaning	Index	Explanation
4	Type of transmission	HP	Hydraulic planetary gear train
5 + 6	Transferable torque	19 26 32 45 (General Motors Powertrain) 45 (Zahnradfabrik Friedrichshafen) 50 70 75 90 95	300Nm 600 Nm 720Nm 350 Nm 450 Nm 500Nm 700 Nm 750 Nm 900Nm 950Nm
7	Manufacturer	G J R Z H	Getrag Jatco General Motors Powertrain Zahnradfabrik Friedrichshafen In-house part

7.4. Sport automatic transmission

In the standard Steptronic Sport automatic transmission, the customer additionally receives 2 shift paddles on the steering wheel and additional functions such as:

- Launch Control
- Manual activation of coasting
- Driving into the speed limiter

7.5. ConnectedShift

ConnectedShift uses the following systems for a predictive shift strategy:

- Use of the navigation data
- Use of the radar sensors

Use of the navigation data is already known from the 5 Series LCI. Since the introduction of the G12, the radar sensors have been used for an anticipatory gear shift strategy.

G30 Powertrain

7. Automatic Transmission

7.6. Configuration options

7.6.1. Stepped Sport shift mode

This graduated sport shift mode is already known from the G12 and is offered with the same functionality in the G30.

7.6.2. Influence of the driving experience switch

Many drive variants have a SPORT PLUS mode in order to support sporty driving with more powerful engines. The shift characteristics are adapted as follows in the SPORT PLUS mode:

- Sharper design of downshifts on braking.
- Further increase of the engine speed in the direction of maximum power.

Mode	Powertrain variantsG30	
	530i	540i & M550i
SPORT PLUS	—	●
SPORT	●	●
COMFORT	●	●
ECO PRO	●	●

7.7. Transmission emergency release

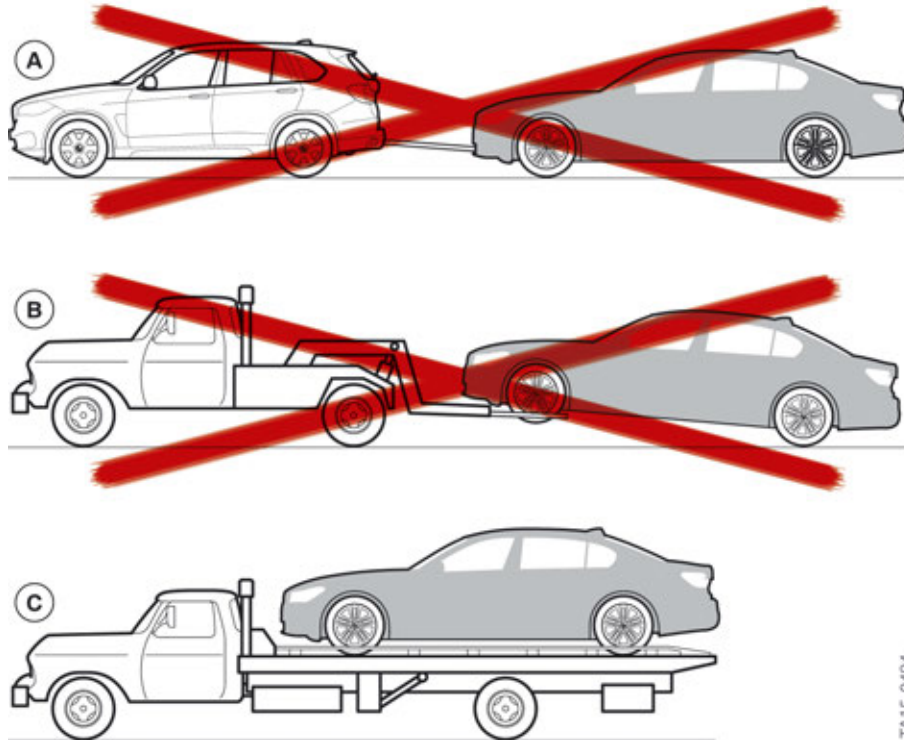
In the event of a breakdown, emergency release of the automatic transmission is possible in 2 different ways.

- 1 Mechanical transmission emergency release.
- 2 Electronic transmission emergency release.

G30 Powertrain

7. Automatic Transmission

7.8. Towing



Towing away the G30

TA15-0484

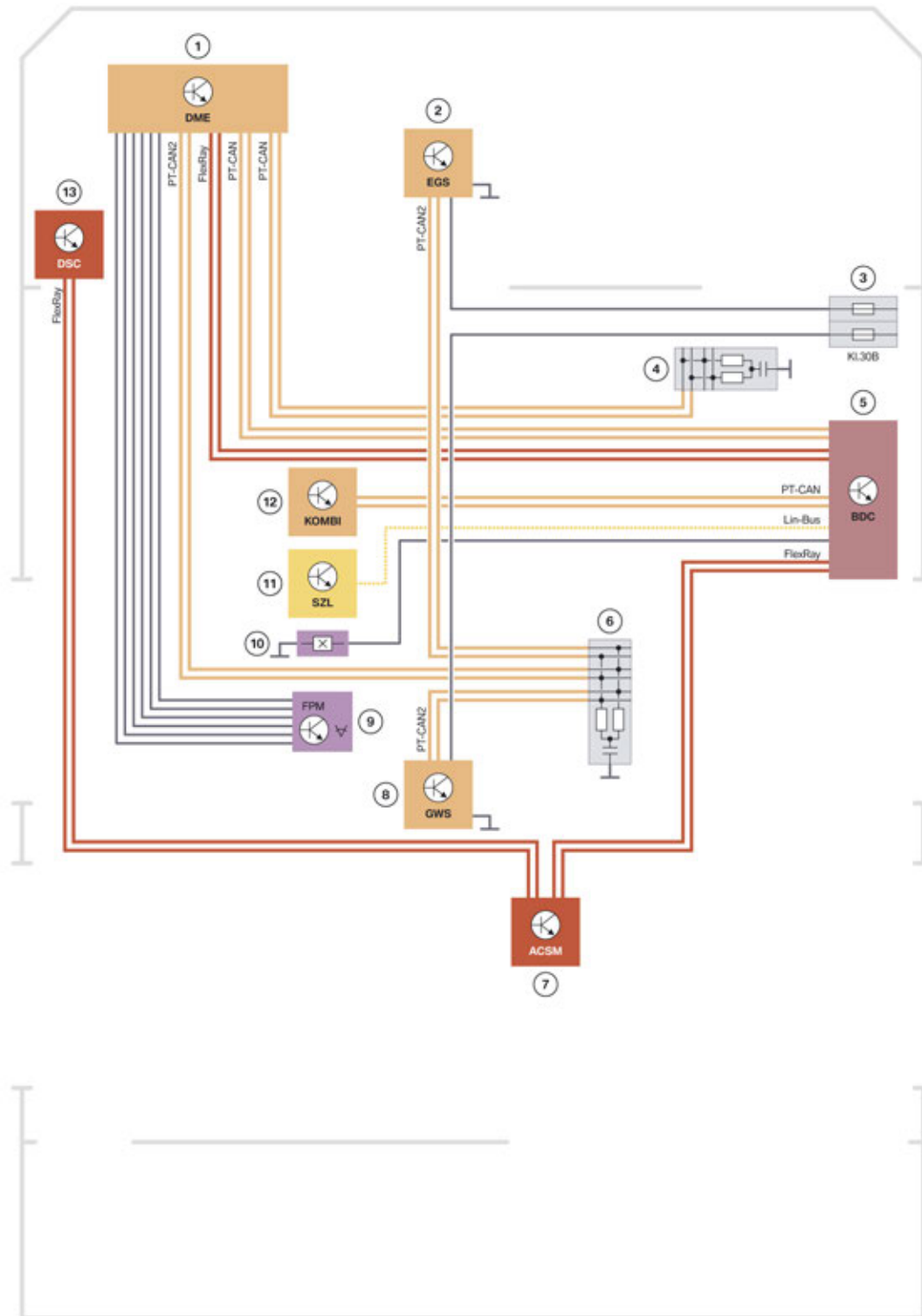
Index	Explanation
A	Towing on both vehicle axles
B	Towing on the rear vehicle axle
C	Recovery on a transport deck

Towing of the automatic transmission on the driven vehicle axle is **not** permitted. Limited time- and speed-dependent towing would not technically damage the automatic transmission, but permanent release of the parking lock cannot be guaranteed due to the changed mechanical and electronic transmission emergency release. Sudden engagement of the parking lock during a towing operation on the driven vehicle axle can lead to damage to the vehicle and to serious accidents.

G30 Powertrain

7. Automatic Transmission

7.9. System wiring diagram



TA15-0056

System wiring diagram of electronic transmission control EGS in the G30

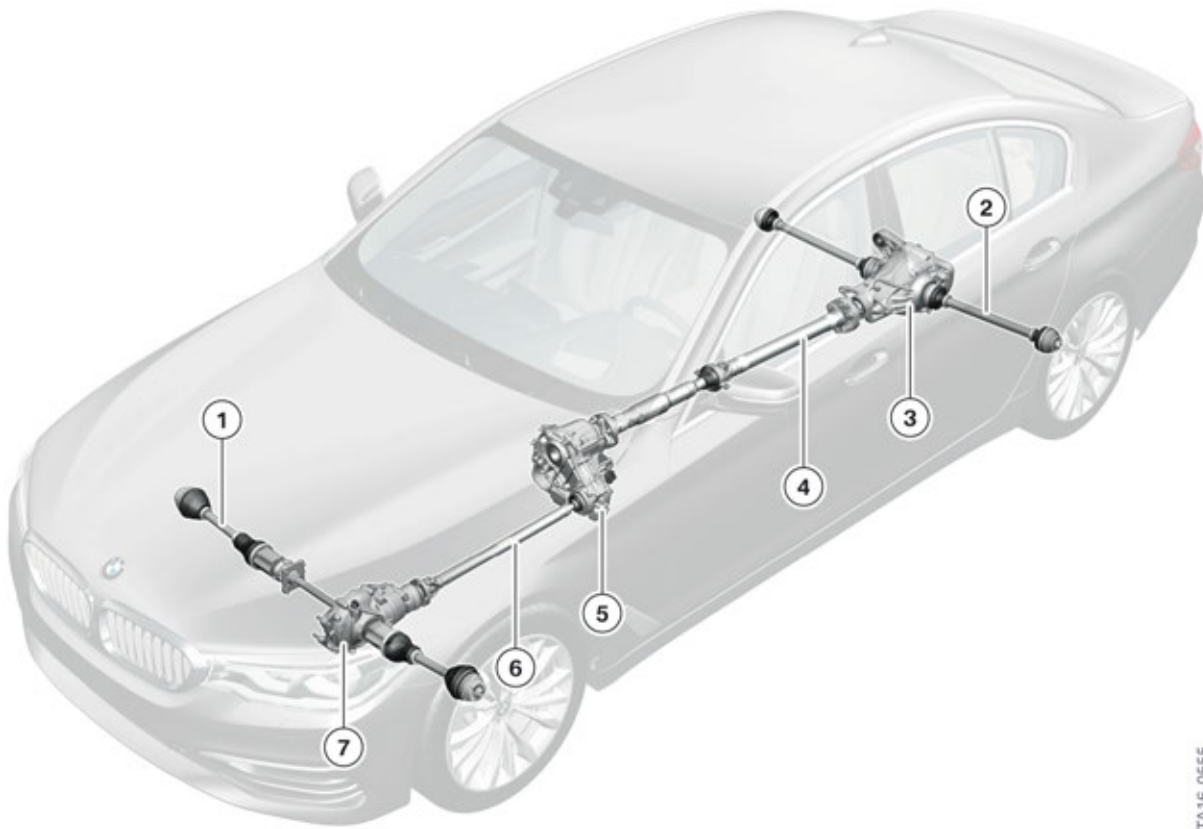
G30 Powertrain

7. Automatic Transmission

Index	Explanation
1	Engine control unit (DME)
2	Electronic transmission control (EGS)
3	Power distribution box, front right
4	CAN terminator 4
5	Body Domain Controller (BDC)
6	CAN terminator 5
7	Advanced Crash Safety Module (ACSM)
8	Gear selector switch (GWS)
9	Accelerator pedal module
10	Brake light switch
11	Steering column switch cluster
12	Instrument panel (KOMBI)
13	Dynamic Stability Control (DSC)

G30 Powertrain

8. xDrive



TA16-0555

Overview of xDrive in the G30

Index	Explanation
1	Output shaft, front
2	Output shaft, rear
3	Rear axle differential
4	Drive shaft
5	Transfer box
6	Drive shaft
7	Front axle differential

The designation of the transfer box is ATC13-1. The ATC13-1 is a standard transfer box and was first used in the G12.

One special feature of this transfer box is the Efficiency Mode introduced in the G12, which leads to a reduction of the splash losses and to reduce fuel savings. It was possible to adopt the measures introduced in G12 for the G30.

G30 Powertrain

8. xDrive

8.1. Oil change on the transfer box

The oil filling of the transfer box is designed for the entire unit service life. This corresponds to a mileage of approximately 150,000 km / 92,000 miles. A fault code entry with an oil change recommendation for the transfer box is stored when this mileage is exceeded.



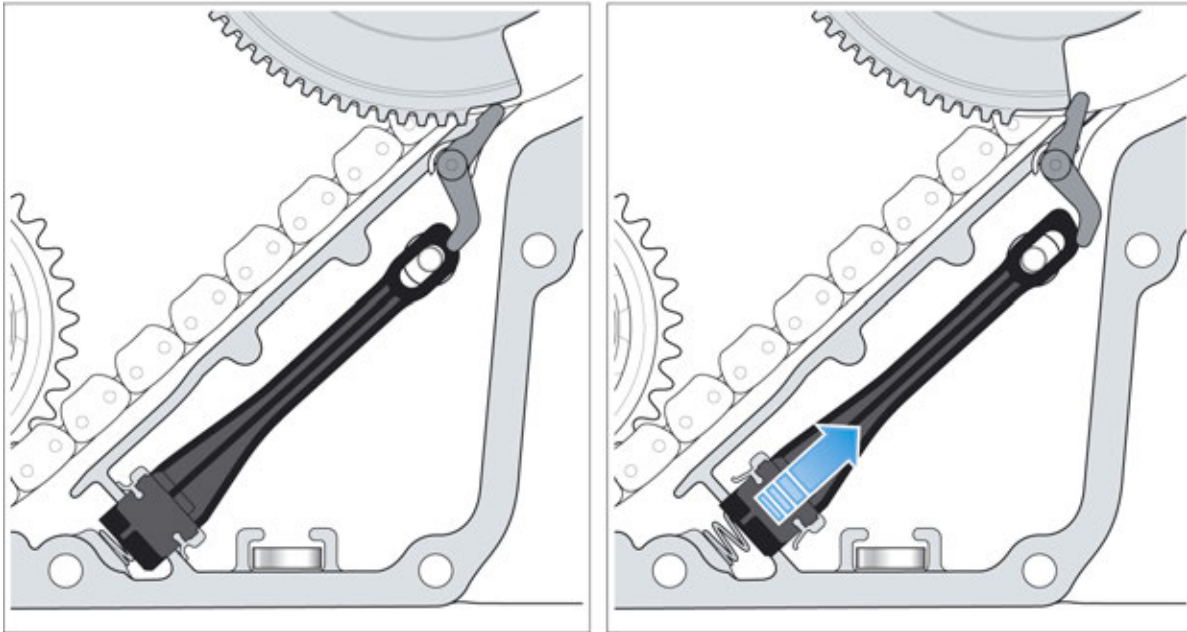
Suction hose with hand pump
Part number 83 30 0 493 337

The transfer box does not have an oil drain plug. The oil filling to be renewed must be drawn off using a hand pump via the opening of the oil filler plug.

TA16-0675

G30 Powertrain

8. xDrive



In order to ensure that the entire oil filling has been exchanged, the oil sump must remain open for the duration of extraction and filling.



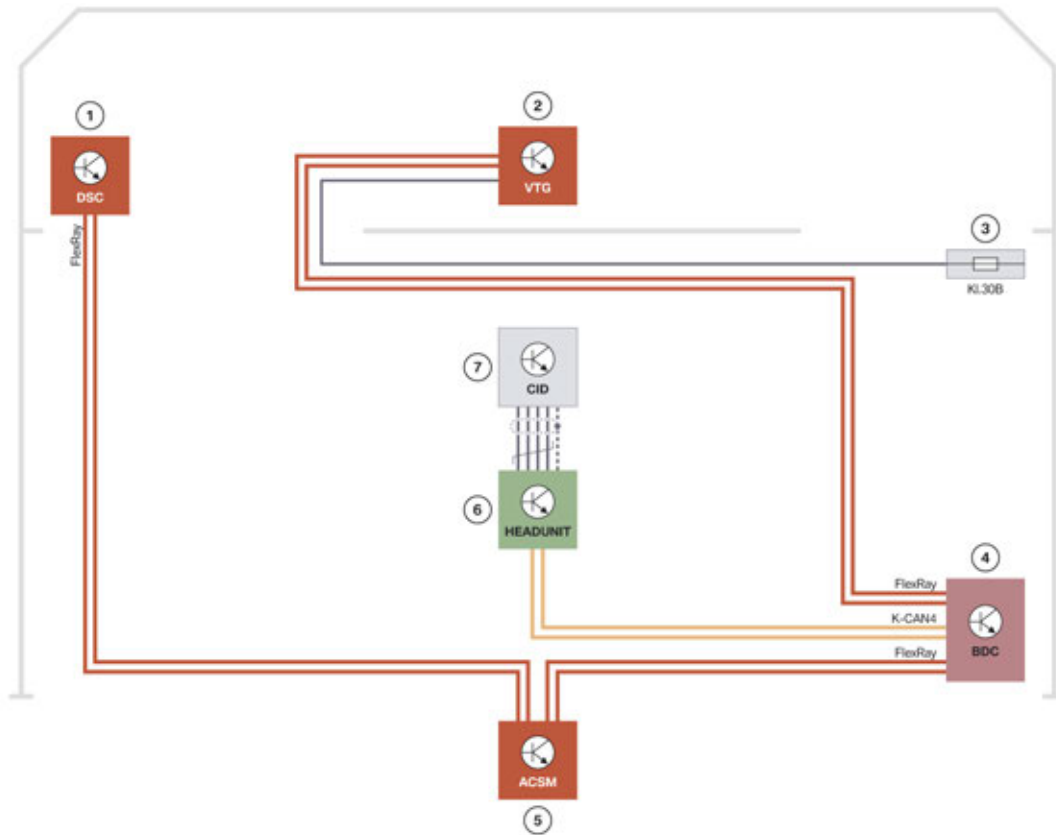
The Service employee can move the oil sump to the open position by means of the “Service function > Transfer box VTG > Oil change” in the BMW diagnosis system ISTA.

Refer to the currently valid repair instructions for the exact procedure.

G30 Powertrain

8. xDrive

8.2. System wiring diagram



xDrive system wiring diagram in the G30

Index	Explanation
1	Dynamic Stability Control (DSC)
2	VTG control unit
3	Power distribution box, front right
4	Body Domain Controller (BDC)
5	Advanced Crash Safety Module (ACSM)
6	Head Unit
7	Central Information Display (CID)
FlexRay	FlexRay bus
K-CAN4	Body CAN4



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