

Technical training.
Product information.

F01H/F02H Complete Vehicle



BMW Service

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Technical Training

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General information

Symbols used

The following symbol/schematic diagram 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 deviations may arise as a 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 element of the technical training of the BMW Group and is intended for the trainer and participants in the seminar. Refer to the current respective information systems of the BMW Group for any changes/additions to the technical data.

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VH-23/International Technical Training

F01H/F02H Complete Vehicle

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1. Introduction

1.1. Market launch

Within BMW EfficientDynamics framework the BMW Group presents another version of the ActiveHybrid 7 from summer 2012. This time the ActiveHybrid 7 is a full hybrid vehicle which uses "second generation" hybrid technology. This technology has already been used in the ActiveHybrid 5. The development code of the new ActiveHybrid 7 is F01H or F02H, depending on whether it is the version with a short or long wheelbase. The US market will only receive the long wheelbase F02H version of the car which replaces the previous ActiveHybrid 7, the F04.

The drive system of the new BMW ActiveHybrid 7 comprises a 6-cylinder in-line engine with Twin-Power turbo technology (N55B30O0), an 8-speed automatic gearbox (GA8P70HZ) and an electrical machine. The BMW 740i sedan (which can already be commended for the efficiency of its combustion engine) now experiences a further reduction in the consumption and emissions levels of about 14% with the integration of BMW ActiveHybrid technology.

Its drivetrain generates a system power output of 260 kW/354 HP. It accelerates the BMW ActiveHybrid 7 from zero to 100 km/h in 5.7 seconds (0 to 60 mph in 5.6s) and restricts the fuel consumption to average values of about 6.8 l for every 100 kilometers, as well as CO₂ emissions to about 158 g/km (values based on EU test cycle, dependent on tire format selected).

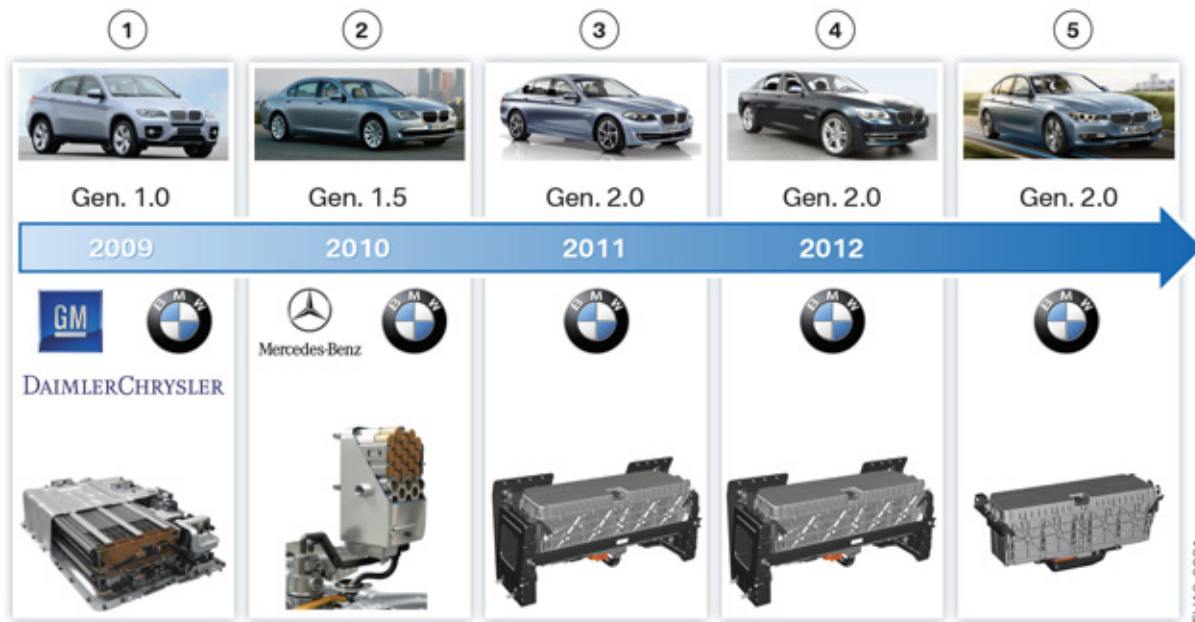
The electric motor of the BMW ActiveHybrid 7 enables fully electric driving and thus emission-free driving at speeds of up to 60 km/h (37 mph). At an average speed of 35 km/h (20 mph), the high-voltage battery provides enough energy to enable fully electric driving across a distance of up to four kilometers (2.5 miles). Furthermore, a start/stop motor function provides additional efficiency by switching off the combustion engine each time the car is stopped at traffic lights or in traffic.

In addition to the settings "Sport+", "Sport", "Comfort" and "Comfort+", the driver in the BMW ActiveHybrid 7 can also choose ECO PRO mode, via the standard driving experience switch. ECO PRO mode supports a particularly relaxed and highly economical driving style thereby preferring a fully electric driving style.

Whereas the high-voltage batteries of the E72 and F04 originated from the cooperation ventures with other automobile manufacturers, the high-voltage battery used in the F01H/F02H is "Made by BMW".

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1. Introduction



Generations of the BMW active hybrid vehicles

Index	Explanation
1	The E72 was launched at the end of 2009 as the first BMW hybrid car. The technology used here (generation 1.0) was a product created by the cooperation venture between General Motors, DaimlerChrysler and BMW. A nickel metal hybrid battery was used as an electric energy storage device.
2	The second hybrid car from BMW introduced in 2010 was the ActiveHybrid 7 (F04). It is a mild hybrid with generation 1.5 technology. This technology was developed together with Mercedes Benz. The highly efficient lithium-ion battery was used in the high-voltage electrical system.
3	The ActiveHybrid 5 was the third BMW hybrid vehicle but used Generation 2.0 technology for the first time. Built since the end of 2011, it also uses a lithium-ion battery as an electrical energy storage unit.
4	In 2012 the production of further BMW hybrid vehicles with Generation 2.0 technology continues. The new ActiveHybrid 7 replaces the F04 and now bears the development code F01H/F02H.
5	The second BMW hybrid vehicle with a production start in 2012 is the BMW ActiveHybrid 3 (development code F30H).

All vehicles in which second generation hybrid technology is used have similar features, components and functions. These are described in detail in the "ST1203 F10H Complete Vehicle" training material available on TIS and ICP. Only the F01H/F02H ActiveHybrid 7 specific features and the technical differences to the F10H are explained in this product information document.



The second generation hybrid technology is described in detail in the "ST1203 F10H Complete Vehicle" training material available on TIS and ICP. This product information manual concentrates only the features specific to the F01H/F02H.

F01H/F02H Complete Vehicle

1. Introduction

Features specific to the F01H/F02H are:

- Identifying features and technical data
- Bus systems
- Displays in the instrument cluster and in the central information display.

1.2. Identifying features

1.2.1. Exterior trim

The BMW ActiveHybrid 7 distinguishes itself from the conventional 7-Series sedan through a range of special features. These includes the unique exterior color "Liquid Blue Metallic" which represents the innovative BMW ActiveHybrid technology. The "ActiveHybrid 7" inscription on the entry sills, on two C-pillars, as well as on the trunk lid indicate that it is a hybrid vehicle. In addition, the "ActiveHybrid" inscription was also installed on the acoustic cover of the combustion engine. The ActiveHybrid 7 is equipped as standard with 18" wheel rims in a V-spoke design. The 19" wheel rims are available as optional equipment. In order to reduce fuel consumption only wheels with 18" Aero wheel rims (Streamline 357) are offered as an option for the F01H/F02H.



Identifying features F01H/F02H

Index	Explanation
1	"ActiveHybrid 7" inscription on the tailgate
2	"ActiveHybrid 7" inscription on the C-pillars
3	Entry sills with "ActiveHybrid 7" inscription
4	18" standard wheel rims
5	Acoustic cover with "ActiveHybrid" inscription

F01H/F02H Complete Vehicle

1. Introduction



The US market will only receive the long wheelbase F02H version of the car which replaces the previous ActiveHybrid 7, the F04.

1.2.2. Interior

The interior equipment of the BMW ActiveHybrid 7 also distinguishes itself from other F01/F02 vehicles by some special features.

The hybrid-specific operating conditions and the state of charge of the high-voltage battery are displayed in the instrument cluster and if desired in the Central Information Display. Both the display in the CID and in the instrument cluster are activated upon start-up.

The plate with the "ActiveHybrid Power Unit" inscription in the luggage compartment refers to the high-voltage battery unit.

1.3. Intelligent energy management

Similar to the first hybrid car of the second generation (the F10H) the operating strategy of the F01H/F02H is also characterized by innovative functions. This includes the advanced hybrid management and the Coasting function (rolling without energy consumption), which was introduced with the F10H, and is also in the F01H/F02H. These functions are automatically available when ECO PRO mode is activated.

The data from the Navigation Professional system (standard on F02H) is used even more efficiently. The intelligent energy management function is also offered on all Generation 2 hybrid vehicles but only the "Home" feature is currently active in the US and Canadian markets.

1.4. Technical data

	Unit	BMW 740i	BMW ActiveHybrid 7
Engine and transmission			
Design		R6	R6
Number of valves per cylinder		4	4
Displacement	[cm ³]	2979	2979
Transmission		GA8HP45Z	GA8P70HZ
Powertrain		Rear wheel	Rear wheel
Final drive ratio		3.077	2.929
Maximum power, combustion engine	[kW (HP)] [rpm]	235 (320) 5800	235 (320) 5800
Maximum torque, combustion engine	Nm (lb-ft) [rpm]	450 (332) (1300 to 4500)	450 (332) (1300 to 4500)

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1. Introduction

	Unit	BMW 740i	BMW ActiveHybrid 7
Complete system power	[kW (HP)] [rpm]		260 (354) 5800
High-voltage battery type		-	Lithium-ion
Power of electrical machine	[kW / HP] [rpm]	-	40/55 from 1800
Maximum torque, electrical machine	Nm (lb-ft) [rpm]	-	210 (184) up to 1300
Vehicle performances			
Acceleration 0 – 60 mph	[s]	5.6	5.6
Maximum speed (limited)	km/h (mph)	250 (155)	250 (155)
Consumption and emissions			
Fuel consumption (EU cycle, urban driving)	[l/100 km]	10.6	6.0
Consumption EU cycle, non-urban driving	[l/100 km]	6.3	7.2
Consumption EU cycle, total	[l/100 km]	7.9	6.8
CO ₂ emissions	[g/km]	184	158
Dimensions and weights			
Length/width/height	[mm]	5079/1902/1471 (F01) 5219/1902/1471 (F02H)	5079/1902/1471 (F01H) 5219/1902/1471 (F02H)
Wheelbase	[mm]	3070 (F01) 3210 (F02)	3070 (F01H) 3210 (F02H)
Turning circle	[m]	12.2 (F01) 12.7 (F02)	12.2 (F01H) 12.7 (F02H)
Track width front/rear	[mm]	1611/1650	1611/1650
Curb weight (DIN)	[kg]	1825 (F01) 1845 (F02)	2095 (F01H) 2123(F02H)
Payload in accordance with DIN	[kg]	650	590
Fuel tank capacity	[liters (gal)]	80 (21.1)	80 (21.1)
Luggage compartment capacity	[liters]	500	360

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1. Introduction

1.5. Equipment

The new ActiveHybrid 7 is available in a European and a US version, as well as a left-hand drive vehicle and right-hand drive vehicle version. In the USA and China markets only the F02H is offered. The F01H/F02H and F01/F02 differ not only in the technical data but also in the range of optional equipment offered.

The most important optional equipment which is not offered in the F02H is briefly summarized below:

- All-wheel drive system xDrive (installation location of the front axle differential is partly taken up by the electrical machine electronics)
- Integral Active Steering
- Dynamic Drive
- Ski bag and through-loading facility (due to installation location of the lithium-ion high-voltage battery)
- Trailer tow hitch
- Extended rear air-conditioning (rear air conditioner, installation location is taken up by the lithium-ion battery).

The following equipment is part of the standard equipment:

- 4-zone A/C system
- Navigation Professional System.

For the first time in a BMW ActiveHybrid the optional equipment "Active Cruise Control" is offered. The Active cruise control with Stop&Go function (ACC Stop&Go) is an element of the optional equipment Enhanced Active Cruise Control (SA5AT). ACC Stop & Go detects not only slowly stopping vehicles but also stationary ones, and can react to these situations accordingly. The detection of stationary vehicles is a therefore unique feature. More information on the topic ACC Stop&Go can be found in the "ST1212 F01/F02 LCI Driver Assistance Systems" available on TIS and ICP.

The longer final drive ratio of the F01H/F02H in comparison to the conventional F01/F02 also helps reduce the fuel consumption. Through the reduced engine speed level this advantage is not only noticeable in normal consumption, but also in everyday use at higher driving speed.

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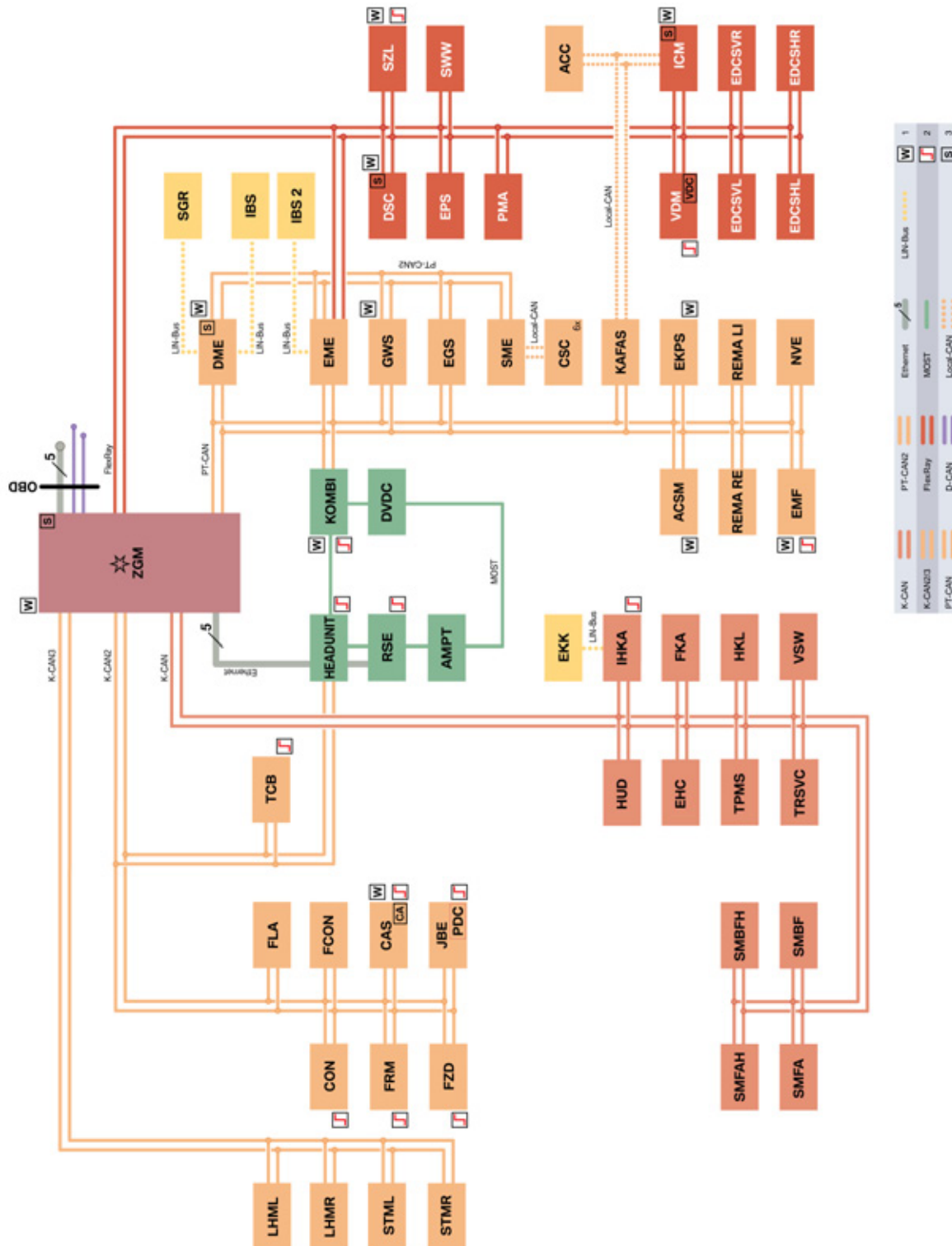
2. Bus Systems

The bus systems of the F01H/F02H are based on the bus systems of the F01/F02. All the main and sub-bus systems of the F01/F02 are also used in the F01H/F02H. Compared with the bus systems of the F01/F02 some new control units have been added, some have had to be adapted and some are not installed in the F01H/F02H at all. The resulting bus structure of the F01H/F02H is as follows.

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2. Bus Systems

2.1. Bus overview



F01H/F02H bus overview

TH12-0101_2

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2. Bus Systems

Index	Explanation
1	Wakeable control units
2	Control units authorized to perform wake-up function
3	Start-up nodes: Control units for start-up and synchronization of the FlexRay bus system
ACC	Active cruise control
ACSM	Advanced Crash Safety Module (ACSM)
AMPH	Amplifier High (high fidelity amplifier)
AMPT	Amplifier Top (top high fidelity amplifier)
CAS	Car Access System
CID	Central information display
CON	Controller
CSC	Cell supervision circuit (CSC)
D-CAN	Diagnosis, Controller Area Network
DME	Digital Engine Electronics
DSC	Dynamic Stability Control
DVDC	DVD changer
EDC SHL	Electronic Damper Control satellite, rear left
EDC SHR	Electronic Damper Control satellite, rear right
EDC SVL	Electronic Damper Control satellite, front left
EDC SVR	Electronic Damper Control satellite, front right
EGS	Electronic transmission control
EHC	Electronic ride height control
EKK	Electrical AC compressor
EKPS	Electronic fuel pump control
EME	Electrical machine electronics
EMF	Electromechanical parking brake
EPS	Electric Power Steering (electromechanical power steering)
Ethernet	Cable-based data network technology for local data networks
FCON	Rear compartment controller
FD	Rear compartment display
FD2	Rear compartment display 2
FLA	High-beam assistant
FlexRay	Fast, real-time and fault-tolerant bus system for use in automotive sector
FKA	Rear heating and air-conditioning system
FRM	Footwell module

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2. Bus Systems

Index	Explanation
FZD	Roof function centre
GWS	Gear selector switch
HEADUNIT	Headunit High
HKL	Automatic luggage compartment lid actuation
HUD	Head-Up Display
ICM	Integrated Chassis Management
IBS	Intelligent battery sensor
IBS2	Intelligent battery sensor 2
IHKA	Integrated automatic heating / air-conditioning system
JBE	Junction box electronics
KAFAS	Camera-based driver support systems
K-CAN	Body controller area network
K-CAN2	Body controller area network 2
K-CAN3	Body controller area network 3
KOMBI	Instrument cluster
LHML	LED main light module, left
LHMR	LED main light module, right
LIN-Bus	Local interconnect network bus
Local CAN	Local Controller Area Network
MOST	Media Oriented System Transport
NVE	Night Vision Electronics
OBD	Diagnostic socket
PDC	Park Distance Control
PMA	Parking Maneuvering Assistant
PT-CAN	Powertrain controller area network
PT-CAN2	Powertrain controller area network 2
RDC	Tire pressure control
REMAFA	Reversible electric-driven reel, left
REMAFB	Reversible electric-driven reel, right
RSE	Rear Seat Entertainment
SGR	Starter motor generator
SMBF	Front passenger seat module
SMBFH	Rear passenger seat module
SME	Battery management electronics
SMFA	Driver's seat module

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2. Bus Systems

Index	Explanation
SMFAH	Rear driver's side seat module
STML	Left-hand headlight driver module
STMR	Right headlight driver module
SWW	Lane change warning
SZL	Steering column switch cluster
TCB	Telematics Communication Box
TPMS	Tire Pressure Monitoring System
TRSVC	Control unit for reversing camera, Top View and Side View
VDM	Vertical Dynamics Management
VSW	Video switch
ZGM	Central gateway module

2.2. New control units

The F01H/F02H uses "second generation" hybrid technology.

For this reason the following control units (not installed in a F01/F02) are shown in the bus overview of the F01H/F02H :

- Electrical machine electronics (EME)
- Battery management electronics (SME)
- Cell Supervision Circuit (CSC)
- Electric A/C compressor (EKK)
- Starter motor generator (SGR)
- Intelligent battery sensor 2.

Note: All of the above-mentioned control units are already known from the F10H.

2.3. Adapted control units

The **IHKA** had to be adapted to make possible the activation of the electric A/C compressor EKK in all operating conditions. The electric A/C compressor control unit communicates with the IHKA via the LIN-bus.

To be able to show additional displays for driving readiness, electric driving, brake energy regeneration and state of charge of the high-voltage battery which are relevant to the driver, the instrument cluster was adapted. In addition, the Check Control messages were enhanced with hybrid-specific messages. A multifunctional instrument display is not installed in the F01H/F02H.

The new **HU-H** was adapted to enable additional, hybrid-specific displays to be shown in the central information display (CID). By selecting "Hybrid" in the "Vehicle Info" menu it is possible to display the energy and power flows for each driving situation and the state of charge of the high-voltage battery.

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2. Bus Systems

The software of the Digital Engine Electronics (**DME**) was adapted due to the torque coordination of the electrical machine/combustion engine. In addition, the DME communicates with the starter motor generator (SGR) via the LIN bus.

Rollover detection is required for the hybrid cars on a worldwide scale so that the high-voltage system is deactivated in the event of a rollover. The rollover detection is realized with the help of the sensors integrated in the Integrated Chassis Management control units (roll rate sensor and vertical acceleration sensor). The **ACSM** had to be adapted with regard to the evaluation of these sensor signals. The safety battery terminal at the auxiliary battery is activated by the ACSM if required.

The software of the Dynamic Stability Control (**DSC**) was also adapted for the regenerative braking. This includes reading-in the brake pedal travel sensor which is connected directly to the DSC control unit as a hardware interface.

The **EGS** control unit was adapted due to the modified transmission. For instance the electric transmission oil pump is controlled by the EGS control unit.

Due to the modified terminal control (driving readiness) the software in the **Car Access System** control unit has also been adapted.

2.4. Omitted control units

Compared to the F01/F02, some optional equipment is not offered in the F01H/F02H. For this reason some control units are no longer shown in the bus overview.

The following table lists the control units no longer used.

Discontinued control unit	Function	Reason for discontinuation
AL	Active steering	Complicated coordination, in particular for electric driving (in the F01/F02 the active steering is only offered in the package with Integral Active Steering).
HSR	Integral Active Steering	Because Integral Active Steering is always offered only together with Active Steering, the control unit for rear axle slip angle control is also omitted.
BCU	Battery Charge Unit	In the F01H/F02H the 12 V Electric Power Steering (EPS) is always installed.

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3. Displays and Controls

The hybrid-specific operating conditions, as well as other information, are displayed in the instrument cluster and if desired in the Central Information Display. The displays in the instrument cluster of the F01H/F02H differ significantly to those in the F10H. In the Central Information Display the changes are less substantial. Instead they are marked by a new visible appearance, which can be traced back to the introduction of the third generation of the HU-H (Headunit High).

The hybrid-specific operating conditions and the state of charge of the high-voltage battery are displayed in the instrument cluster and if desired in the Central Information Display.

The following hybrid-specific operating conditions are shown:

- "Ready to drive" mode
- Electrical driving
- Boost function
- Brake energy regeneration
- State of charge of the high-voltage battery
- Information on the use of the hybrid drive and ECO PRO mode.

Some of them are shown permanently in the lower part of the rev counter and others the driver has to specifically call up. Both the displays in the CID and in the instrument cluster are activated when terminal 15 is switched on. Their content and appearance are described in the following chapters.

The hybrid-specific Check Control messages of the F01H/F02H are identical to those in the F10H. An overview can be seen in the "ST1203 F10H Complete Vehicle" training manual. Similar to the F10H, the same also applies for the F01H/F02H in that no additional action is required by the driver despite the two different drive systems. The operating strategy reacts immediately to the current driver's choice and many other input variables. Based on this it uses the two drive systems particularly efficiently or dynamically to correspond to the driver's choice.

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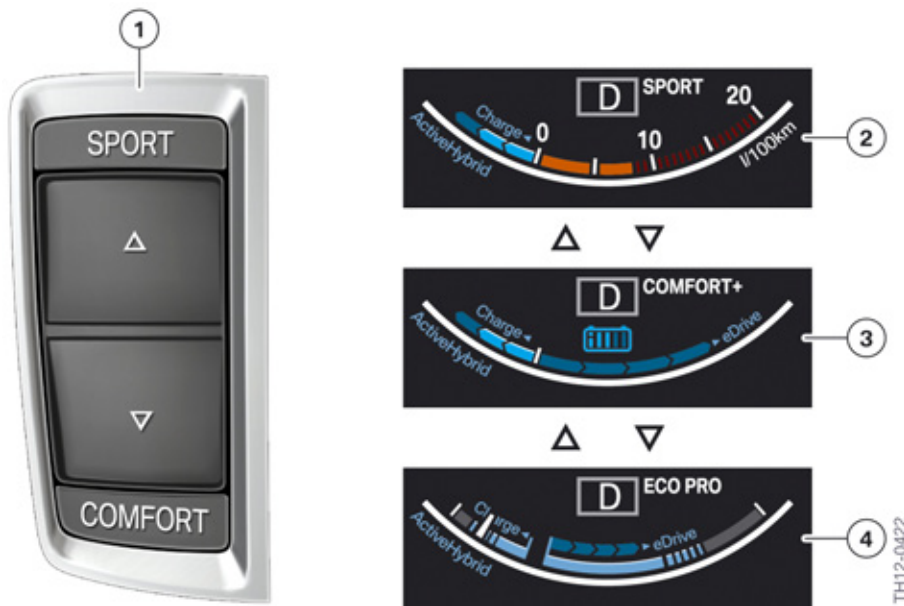
3. Displays and Controls

3.1. Displays in the instrument cluster

The display concept for the hybrid-specific operating conditions and information are specific to the F01H/F02H in the following information and thus differ from the F10H:

- Electric driving and brake energy regeneration: Change of the display direction
- State of charge of the high-voltage battery: graphic/numeric
- Driving experience switch: Large dependency on the selected mode.

With help of the following graphic it can be seen how the selected mode on the driving experience switch influences the displays in the instrument cluster. In the DSC OFF, SPORT+ and SPORT mode there is the familiar display of the current fuel consumption. In COMFORT and COMFORT+ mode the state of charge of the high-voltage battery, as well as the electric driving power used, are shown. Finally in ECO PRO mode the driving power used or the power during brake energy regeneration is constantly shown. A white mark moves around the curve-shaped scale depending on the power.



Displays in the instrument cluster of the F01H/F02H dependent on the selected mode

Index	Explanation
1	Driving experience switch
2	TRACTION OFF, SPORT+ and SPORT mode
3	COMFORT+ and COMFORT mode
4	ECO PRO mode

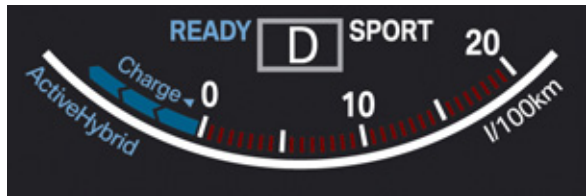
To highlight the differences the displays of the individual operating conditions and information dependent on the selected mode are shown in individual graphics in the following sub-chapters.

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3. Displays and Controls

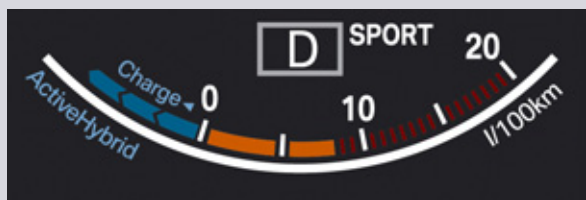
3.1.1. SPORT+ and SPORT mode

In TRACTION OFF, SPORT+ and SPORT mode purely electric driving is not possible thus there is no display for this.



Driving readiness:

The rev counter is at "zero" and under the rev counter the blue writing "READY" is shown.



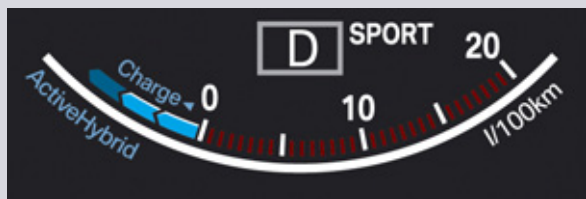
Driving by means of a combustion engine:

The rev counter typically shows the current engine speed and the current fuel consumption is shown with a red curve.



Boost function:

Position of the rev counter at high engine speed and simultaneous display of the writing "eBoost" at the right end of the scale. Current fuel consumption shows maximum.



Brake energy regeneration:

Display for the strength of the brake energy regeneration in clockwise direction (differs to the F10H). The first segment is highlighted as soon as the driver releases the accelerator pedal. Active first and second segment refer to braking with help of the electrical machine. The highlighted third segment means braking with a mechanical brake.

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3. Displays and Controls

3.1.2. COMFORT + and COMFORT mode

In this mode the state of charge of the high-voltage battery is permanently shown with a small battery symbol under the display of the drive position. The number of blue bars in this battery symbol shows the approximate state of charge. This display is not available in the other modes of the driving experience switch.

Besides the graphic display there is a numerical display of the state of charge: The customer can call up the state of charge as a function of the on-board computer and have it displayed permanently if desired. This display once again shows the customer-relevant state of charge of the high-voltage battery, which is from 0% to 100%.



Driving readiness:

The rev counter is at "zero" and under the rev counter the blue writing "READY" is shown.



Electric driving:

The driving power used during the purely electric driving is displayed in the form of four segments. The more segments that are highlighted the more driving power that is used. The segments are aligned counterclockwise (differs to the F10H). The writing "eDrive" is at the end of the scale.



Driving by means of a combustion engine:

The rev counter typically displays the current engine speed.



Boost function:

Position of the rev counter at high engine speed and simultaneous display of the writing "eBoost" at the right end of the scale.



Brake energy regeneration:

Display for the strength of the brake energy regeneration in clockwise direction (differs to the F10H). The first segment is highlighted as soon as the driver releases the accelerator pedal. Active first and second segment refer to braking with help of the electrical machine. The highlighted third segment means braking with a mechanical brake.

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3. Displays and Controls

3.1.3. ECO PRO mode

In ECO PRO mode the operating conditions are highlighted by a white mark.



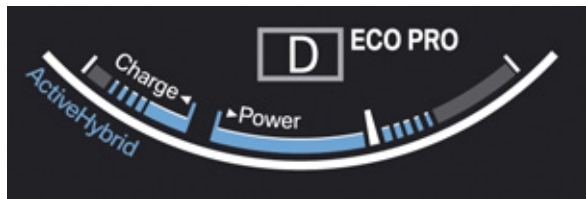
Driving readiness:

The rev counter is at "zero" and under the rev counter the blue writing "READY" is shown. The white mark on the scale is in the neutral position. In both cases it signals that no driving power is used and no brake energy is recovered.



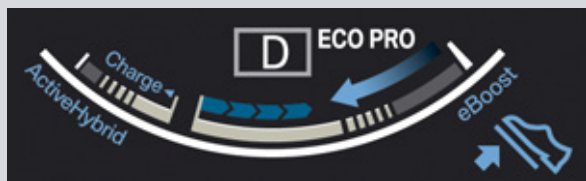
Electric driving:

The driving power used during the purely electric driving is displayed in the form of four segments. The more segments that are highlighted the more driving power that is used. The white mark also moves over the curve-shaped power scale and permanently shows the driving power used. The writing "eDrive" is at the end of the four segments.



Driving by means of a combustion engine:

The rev counter typically displays the current engine speed. The segments for electric driving are not visible. Instead the curve-shaped power scale is shown, which now has the writing "POWER". The position of the white mark now no longer shows how much electric driving power is used, but how much driving power is requested by the combustion engine.



Boost function:

Position of the rev counter at high engine speed and simultaneous display of the writing "eBoost" at the right end of the scale. The driver no longer uses the vehicle efficiently. He therefore receives the information to reduce the accelerator pedal angle. At the same time the power scale changes from blue (efficient) to grey (inefficient).



Brake energy regeneration:

Display for the strength of the brake energy regeneration in clockwise direction (differs to the F10H). The display is not effected by highlighted segments, but by the white mark which now moves over the neutral position to the left.

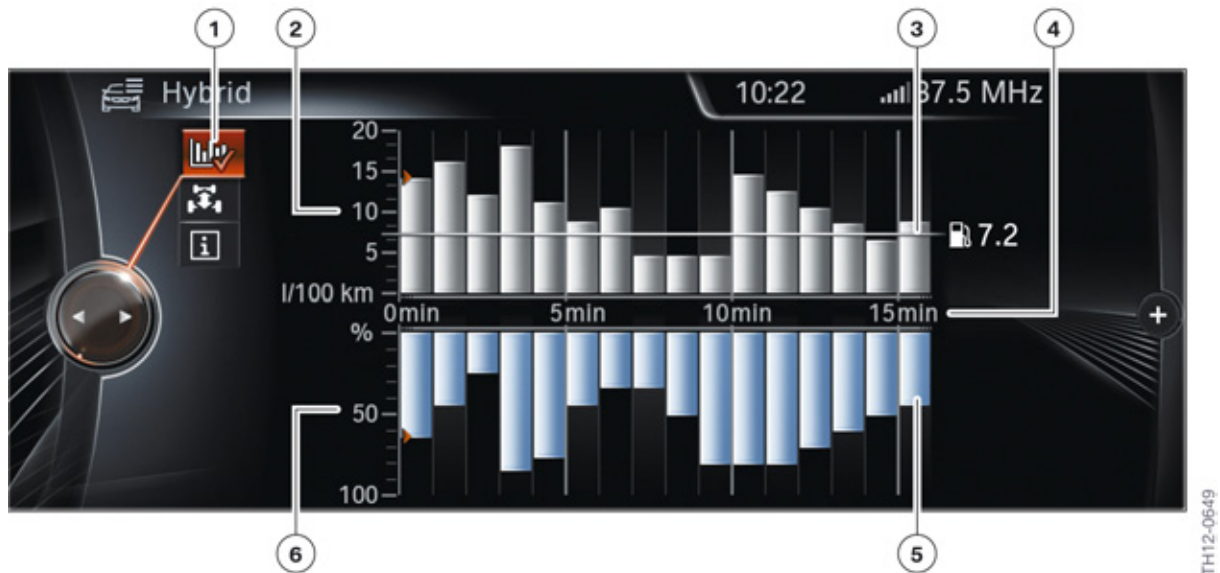
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3. Displays and Controls

3.2. Displays in central information display

The hybrid-specific displays in the central information display CID are also called up in the F01H/F02H via the menu "Vehicle info > Hybrid". The content shown is basically identical to that in the F10H. The changes are suitable to the display style only in the detail and in the graphic preparation, which is defined by the third generation HU-H.

The graphic implementation for hybrid utilization is displayed below.



Display for utilization of the hybrid system

Index	Explanation
1	Selection of the display for hybrid use
2	Consumption scale of the combustion engine
3	Average consumption of the combustion engine
4	Time axis (16 minutes)
5	Bar representing minutes
6	Percentage scale for use of the electrical machine

F01H/F02H Complete Vehicle

3. Displays and Controls

3.2.1. Coasting function

The "coasting" function is already known from the F10H.

The coasting (rolling without energy consumption) means that the combustion engine is also shut down at higher speeds up to about 160 km/h (100 mph) if it is not required for the powertrain. At the same time the separating clutch in the drivetrain is opened so that the vehicle rolls without engine braking effect.

To be able to use "coasting" the driver must have selected ECO PRO mode. If the driver takes his foot off the accelerator pedal, the function becomes active after a short while, the combustion engine switches off and the separating clutch is opened. The advantage of increased efficiency through "coasting" is clearly visible: in this operating condition no fuel whatsoever is used.



Display for ECO PRO tips

Index	Explanation
1	ECO PRO mode is selected
2	Symbol for reason to take foot off the accelerator pedal
3	Text information for reason to take foot off the accelerator pedal

The symbol to reduce the accelerator pedal angle also appears in the instrument cluster.



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