

# TIPS OG TRICKS

Maksimal udbytte af dataløsning og macsDIA



Elektriske køretøjer fylder mere og mere på de danske veje og bliver en større del af hverdagen på værkstedet for hver dag der går.

Den digitale fremtid er her nu, og det har aldrig været vigtigere, at dit værksted er på forkant med den teknologiske udvikling og branchens seneste tendenser. Med en dataløsning fra Hella Gutmann er du sikker på, at dit værksted altid har værktøjet og den nødvendige viden tilgængelig, så I altid er klar på at takle morgendagens udfordringer.

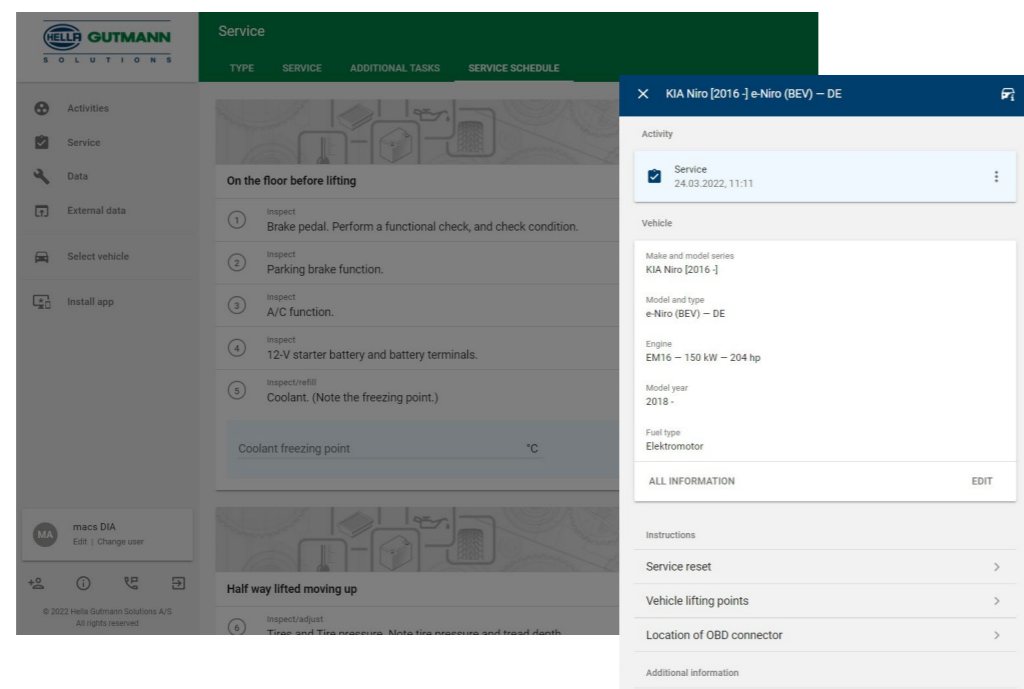
I får blandt andet adgang til sikkerhedsforskrifter og arbejdsprocedurer, så I kan arbejde sikkert og effektivt med højvolts kredsløb på el- og hybridbiler. Alle EV-køretøjer i dataløsningen er kendetegnet med forkortelserne BEV, HEV eller PHEV, så I altid kan skelne mellem el-, hybrid-, eller plug-in hybridbiler.

**Disconnect high-voltage circuit. Warning!**

- Use personal protective equipment approved for 1000 V.
- The high-voltage circuit breaker is located under the rear seat.
- Remove the trunk floor liner.
- Remove the rear seat cushions.
- Remove the cover plate from the high-voltage circuit breaker.
- Remove the high-voltage circuit breaker.
- Be careful not to damage the locking mechanism on the high-voltage circuit breaker.
- Release the high-voltage circuit breaker lock (1).
- Flip the high-voltage circuit breaker handle to the stop position (2).
- Pull the high-voltage circuit breaker from the high-voltage circuit breaker socket (3).
- The high-voltage circuit breaker must be safely stored to avoid unintentional installation and/or connection.
- Wait 10 minutes after disconnecting the high-voltage circuit to allow the circuit to discharge.

Body		▼
Passenger compartment		▼
Electrical system		▲
<b>Battery</b>		
Auxiliary battery, type	12 V / 45 Ah SAE 410 A	i
Auxiliary battery, terminal location	See information	i
<b>Start and charging system</b>		
Charging socket, type	See information	i
Engine		▼
Transmission		▼
Cooling system		▼
Suspension		▼

PRINT



**Important**

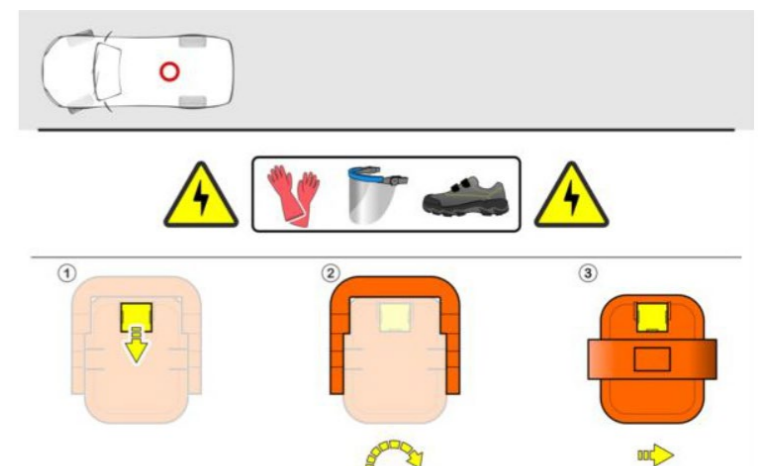
Work on high-voltage systems should only be performed by personnel with the necessary training with regard to electric and hybrid vehicles. Only work on high-voltage components when the high-voltage circuit is deactivated. It is not necessary to deactivate the high-voltage system when performing ordinary service work.

It is recommended to contact the importer/manufacturer who will check for outstanding service campaigns (this may be a requirement if the vehicle is under warranty).

If the vehicle is covered by a corrosion or paint warranty, specific checks can be required in order to maintain the warranty. In this case, the checks must be done in compliance with the directions of the importer.

"Extra work" should be selected if the vehicle mainly is used under one or more of the driving conditions described under the selected service type (notice the shorter intervals).

- Driving in regions with road salt or other corrosive materials
- Driving in sandy regions
- Driving in mountainous regions
- Driving in dusty areas.
- Driving in areas with very low temperatures (often below -15 °C)
- Driving with a roof box
- Driving at more than 170 km/h
- Off-road driving
- Taxi driving
- Courier driving



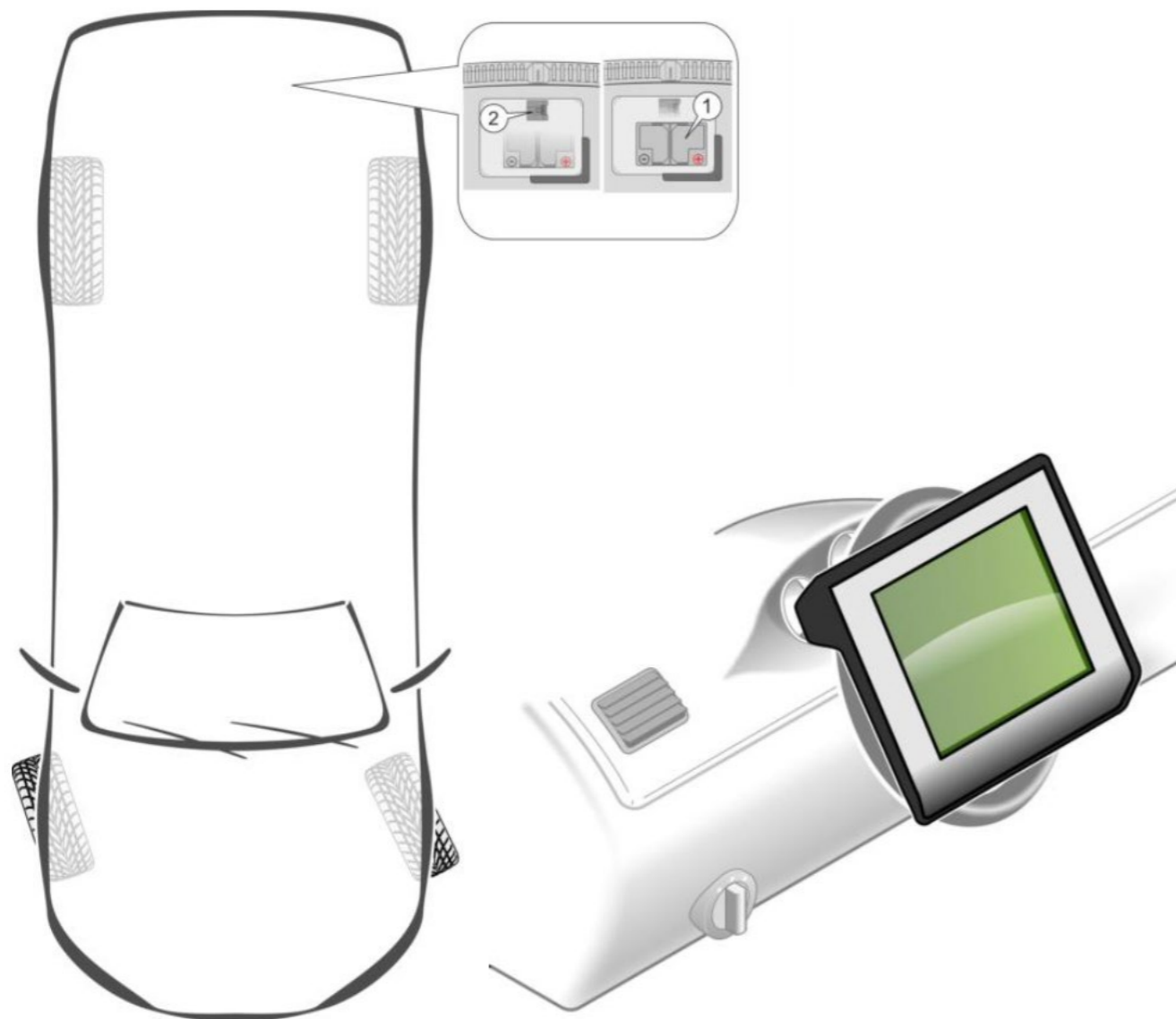
Den moderne bil er meget mere end bare en bil. Nutidens biler har udviklet sig til højteknologiske datacentre.

Det betyder at du som mekaniker er afhængig af at have adgang til den nødvendige viden, således du kan navigere i de forskellige arbejdsprocesser til hvert enkelt bilmærke og model.

Med en dataløsning fra Hella Gutmann får du adgang til battery management, som hjælper dig med at få indsigt i bilernes batterisystemer og systemets opbygning.

Med battery management slipper du for ubehagelige overraskelser, hvor tidsforbruget eksploderer uforudsigeligt og kundens regning vokser unødvendigt. Battery management hjælper dig med at være på forkant med opgavens omfang, så dine tilbud altid er korrekt afstemt.

I følgende eksempel tages der udgangspunkt i en BMW med start/stop system. Ved afbrydelse af bilens 12V system skal flere af bilens systemer kalibreres på ny. På siden til højre vises arbejdsprocessen for at kalibrere den pågældende BMW.



## Coding when disconnecting or connecting the battery

### The ECU must be coded after battery change:

- Perform encoding in connection with battery registration if it is required by the system.

### Setting:

- Clock: check/set the time

### Coding the tilt/slide sunroof comfort closing:

- Turn on the ignition.
- Temperature is 23 +/- 5 °C
- Do not perform initialization in direct sunlight.
- Press and hold the switch in "LIFT" position during the entire procedure.
- When the sunroof is in fully open position, hold the "LIFT" switch.
- The basic setting starts automatically after approx. 30 s.
- During the basic setting, the sunroof first opens fully and then closes.
- Release the switch.
- The basic setting is complete.
- If not, repeat the procedure.
- Make sure that the error message is no longer shown in the display.
- Turn off the ignition

### Coding the window regulator comfort closing:

- Close all doors during initialization.
- Turn on the ignition.
- Press and hold the switch to fully close the window.
- Immediately press and hold the switch for approx. 2 seconds.
- Fully open the side window, then release the switch.
- Immediately press and hold the power window switch for about approx. 2 seconds.
- Press and hold the switch to fully close the window.
- Immediately press and hold the switch for approx. 2 seconds.
- The basic setting is complete.
- If not, repeat the procedure.
- Repeat the procedure for remaining windows.
- Turn off the ignition

### Resetting window to basic setting:

- Turn on the ignition.
- Make sure that all doors are closed.
- Fully open the side window, then release the switch.
- Press and hold the power window switch for 15-20 seconds.
- Resetting is complete.

### Calibrating the steering angle sensor:

- Start the engine.
- Let engine idle.
- Fully turn steering wheel to both sides.
- Make sure that the steering wheel and the wheels point straight ahead.
- Turn off the ignition
- Turn on the ignition.
- Make sure that the error message on "Active Steering" in the display has gone off.
- Delete trouble code memory.

### Calibrating the interior rear-view mirror compass:

- Setting the magnetic deflection zone:
- Activate the switch at the bottom of the mirror frame with a suitable tool.
- A number shows in the compass display.
- Continue activation until the correct magnetic deflection zone is selected.
- Wait until the direction indicator shows.
- The magnetic deflection zones are now set.
- Turn off the ignition

### Calibrating the compass:

- Turn on the ignition.
- Activate the switch at the bottom of the mirror frame with a suitable tool.
- "C" shows in the compass display.
- Drive vehicle 2 to 3 times in a circle at approx. 15 km/h.
- The calibration process is complete when the direction indicator shows.

Med en dataløsning fra Hella Gutmann får du adgang til informationer om dæktrykkontrol-systemer, også kendt som tire pressure management system (TPMS).

TPMS-informationerne i dataløsningen hjælper dig med at skabe et overblik over bilens elektroniske dæktryksystem.

Du får bl.a. indsigt i, om bilens TPMS er et direkte eller indirekte system, hvilket kan spille en stor rolle i forhold til måden, systemet skal nulstilles/kalibreres på.

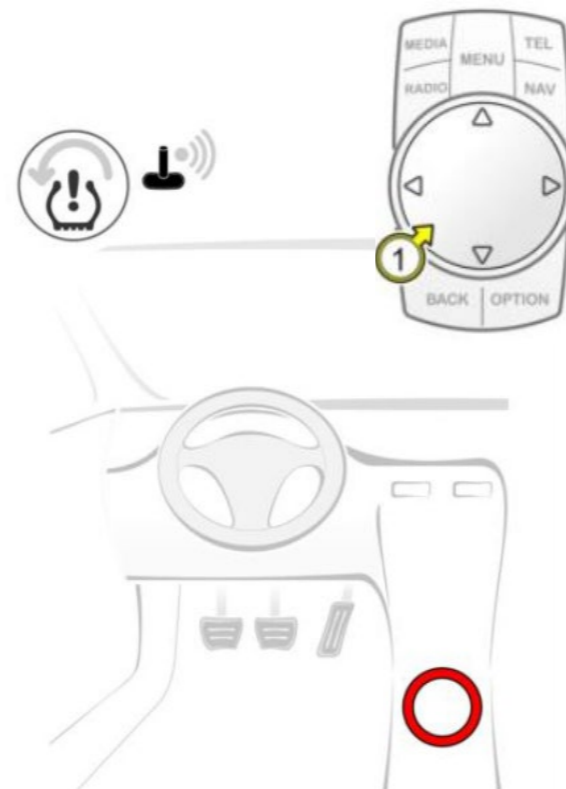
Nogle systemer kræver f.eks., at bilen skal ud og køre i mindst 15 minutter med mere end 30 km/t, for at systemet nulstilles, mens andre systemer kan nulstilles uden behov for kørsel.

Vær på forkant med opgavens omfang med en dataløsning fra Hella Gutmann, hvor du får adgang til komplette vejledninger, der beskriver arbejdsprocessen fra a til z. Således har du altid vejledningerne lige ved hånden og kan derved altid hurtigt og effektivt formidle den rette vejledning og informationer til dine kunder.

På den måde sikrer du altid maksimal kundetilfredshed!

I de to følgende eksempler kan du se forskellen på en:

- BMW med direkte TPMS og
- VW Passat med indirekte TPMS.



## After tire pressure check and adjustment

The tire pressure monitoring system (TPMS) uses different colors to display the tire pressure status:  
 Yellow color: indicates that the tire pressure in one or more tires is outside the normal range.  
 Green color: indicates that the tire pressure in all tires is within the normal range.  
 Grey color: indicates that the tire pressure monitoring system is deactivated (system malfunction).

- Turn on ignition.
- Press the button (1).
- Turn button (1) until "Vehicle information"\* is highlighted.
- Press the button (1).
- Turn the button (1) until "Vehicle status"\* is highlighted.
- Press the button (1).
- Turn the button (1) until "Reset"\* is highlighted.
- Press the button (1).
- "Reset"\* and "Cancel"\* are displayed.
- Turn the button (1) until "Reset"\* is highlighted.
- Press the button (1).
- Start the engine.
- Drive for at least 15 minutes at a speed of more than 30 km/h until the display shows that the new values have been registered in the tire pressure

Text marked with \* may vary.

## After tire pressure check and adjustment

Text marked with \* may vary.

- Turn on ignition.
- Select "Car"\*.
- Select "Setup"\*.
- Select "Tires"\*.
- Select "Set"\*.
- Select "Confirm"\*.
- Drive for at least 20 minutes to register the new values in the tire pressure monitoring system.
- Basic setting of the tire pressure monitoring system is complete.

