

SIT-SIT-SI2016-002116405 SIT-SIT-SI2016-002116405 - Test instructions for the exclusive running of the combustion engine for exhaust-gas test (AU) on BMW vehicles with electric drives and Plug-in Hybrid Technology (PHEV) or with Range Extender (REX) - V.1, VIN: XXXXXXXX

ISTA system version	4.10.10.15566	Data version	R4.10.10	Programming data	-
VIN	XXXXXXXX	Vehicle	I/I01/HAT/i3 94 (+ REX)/IB1/AUTO/ECE/LL/2016/06		
Int.lev.works	-	Int.lev.(cur.)	-	Int.lev.(tar.)	-
Mileage	-				

00 21 16 (405)

Test instructions for the exclusive running of the combustion engine for exhaust-gas test (AU) on BMW vehicles with electric drives and Plug-in Hybrid Technology (PHEV) or with Range Extender (REX)

2/F45 PHEV; 3/F30 PHEV; X5/F15 PHEV; i3/I01 with range extender; i8/I12;

Situation: This Service Information describes the procedure for the exclusive running of the combustion engine for the official exhaust-gas test (AU) on BMW vehicles with Plug-in Hybrid Technology (PHEV) as well as with Range Extender (REX) in BMW i3.

Vehicles concerned: F45 PHEV; F30 PHEV; F15 PHEV; I01 with range extender (BMW key number 1Z41) and I12;

Procedure: 1. In principle, the same test scopes and specifications are valid as applicable to the official exhaust-gas test in the EU or in Germany on vehicles with petrol engines from exhaust emission stage EURO 6.

See SI 00 19 16 (402) "AU test specifications for petrol vehicles from exhaust emission stage EURO 6".

2. Procedure for the start-up of the combustion engine for "Emission measurement on the exhaust tailpipe", provided this is required by the national regulation or is always required in Germany as an additional check because of readiness test code not set uniquely or incomplete readiness test code:

2.1 BMW 225xe / F45 PHEV and BMW 330e / F30 PHEV:

Procedure for the exclusive running of the combustion engine:

Raise bonnet.

Establish operating readiness by using the brake pedal and simultaneously actuating the "Start/Stop" button.



Graphic: "Start/stop" button



Ready display in instrument cluster

"Ready" display in the instrument cluster indicates the operational readiness.

Set selector lever to position "P".

Gas pedal for idle state emission measurement not activated. Note: Depending on the state of charge of the high-voltage battery (HV) an increased load can be effected for the battery charge also in idle operation.

Operate the accelerator pedal: Combustion engine starts and can be held in idle position or increased idle position depending on the accelerator pedal position.

To stop (stop the engine), press the "Start/Stop" button again.

The type-specific data for engine speeds, maximum CO value; oxygen sensor and oxygen sensors current values can be found in the current BMW AU nominal data.

2.2 BMW X5 / F15 PHEV:

Procedure for the exclusive operation of the combustion engine:

1. Engine is at operating temperature ($> 60^{\circ}\text{C}$), ignition is switched off.
2. Unlock the front compartment lid from the inside of the compartment lid opener (laterally on the driver's side A-pillar).
3. Selector lever must stay in the "P" position.
4. "Switch on ignition", that is, establish driving readiness by pressing the "Start/Stop" button while simultaneously actuating the brake pedal.



Graphic: "Start/stop" button

The combustion engine starts by itself and remains in idle position as long as the driving speed does not exceed 2 km/h!

5. Exhaust gas and current measurement of the oxygen -control sensor in idle position and at an increased idle position speed by correspondingly actuating the accelerator pedal.

The brake pedal can now be released.

6. To stop (stop the engine), press the "Start/Stop" button again or close the bonnet.

The type-specific data for engine speeds, maximum CO value; oxygen sensor and oxygen sensors current values can be found in the current BMW AU nominal data.

2.3 BMW i3 / I01 with range extender (BMW key number 1Z41):

AU mode for forced running the Range Extender combustion engine:

1. The driver's door and tailgate must be open. Do not close them during the AU procedure!
2. Switch on ignition (press "Start/Stop" button twice, without brake actuation).
3. Within 60 seconds, push through and hold the accelerator pedal.
4. Within 20 seconds, actuate the brake pedal three times.

5. Release the accelerator pedal and press the "Start/stop" button when the brake pedal is actuated.

6. The combustion engine starts if the state of charge (SOC) of the high-voltage battery, that is, the current battery charge capacity is less than 75% and sufficient fuel is in the tank.

The "AU mode activated" status is given in the central information display (CID) as a CC message while the combustion engine is running and a warning triangle lights up in the instrument cluster.

- See position 2 in the figure given below.

- Position 1 only indicates that the DSC system is switched off.



Figures: Warning in the instrument cluster and display in the CID

The idle speed is started automatically during the warm-up phase. For the subsequent exhaust gas or oxygen sensor current measurements, two **engine speed ranges** (Quasi-idle speed and increased rotational speed) of the combustion engine can be approached via the accelerator pedal position

The AU mode is not possible when the battery state of charge is too high. In this case, the following Check Control message appears: "Battery state of charge too high". In this case, as many electrical consumers as possible, such as seat heating, rear window heating, headlights; air conditioning, etc., are switched on to significantly reduce the battery state of charge.

7. The AU mode is automatically ended:

(Termination of the display according to position 2 in the figure above)

- After 20 minutes,
- or by switching off the ignition (actuate "Start/Stop" button).
- or at start of the journey

The type-specific data for engine speeds, oxygen sensor values, etc. can be found in the current BMW AU nominal data.

2.4 BMW i8 / I12:

AU mode for the exclusive running of the combustion engine:

1. Get in, close the doors, do not buckle the seat belt.
2. With the brake pedal depressed, actuate the "Start/stop" button (see point 1 in the below-mentioned figure).

The driving readiness is established and indicated by an indicator light according to the programming level (see point 2 in figure).



Graphic: "Start/Stop" button to the left of the selector lever

3. Pull the right parking brake button next to the selector lever (see section 1 in below-mentioned figure) **upwards**.



Graphic: Button for parking brake

4. With the "Unlocking command" button pressed, move the selector lever

(see figure) from the "P" position via "D" to the left to "**Sport**". The combustion engine starts by itself and runs in idle position.

5. Remove the foot from the brake, open the driver's door, the selector lever automatically jumps to "P".

6. Perform the exhaust gas and current measurement of the oxygen-control sensor in idle position and by accelerating in the increased idle range.

7. To stop (stop the engine), press the "Start/Stop" button again.

The type-specific data for engine speeds, maximum CO value; oxygen sensor and oxygen sensors current values can be found in the current BMW AU nominal data.