

**NEW VOLVO XC90
TWIN ENGINE PLUG-IN HYBRID**

**INFO AND INSTRUCTIONS FOR
CARRIERS AND LOGISTICS
SERVICE PROVIDERS**

XC90
T8 TWIN ENGINE
PLUG-IN HYBRID

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INTRODUCTION



General information about the XC90 T8 Twin Engine Plug-in Hybrid

The XC90 T8 Twin Engine Plug-in Hybrid is driven like any other vehicle but it has certain functionality that differs from a vehicle powered exclusively by a gasoline engine. The electric motor powers the vehicle primarily at low speeds; the gasoline engine is used at higher speeds or during more active driving.

High-voltage electrical current



WARNING

A number of electrical components in the XC90 T8 Twin Engine Plug-in Hybrid use high-voltage current and can be extremely dangerous if handled incorrectly. These components and any orange wiring in the vehicle may only be handled by trained and qualified Volvo service technicians.

WARNING

Please be aware that there is no sound from the engine when the vehicle is being powered by the electric motor and it may be difficult to detect by children, pedestrians, cyclists and animals. This is especially true at low speeds.

START THE ENGINE



The remote control key is not used during starting because the car is equipped with support for keyless starting as standard.

(Blister pack with remote keys are kept at front passenger seat.)

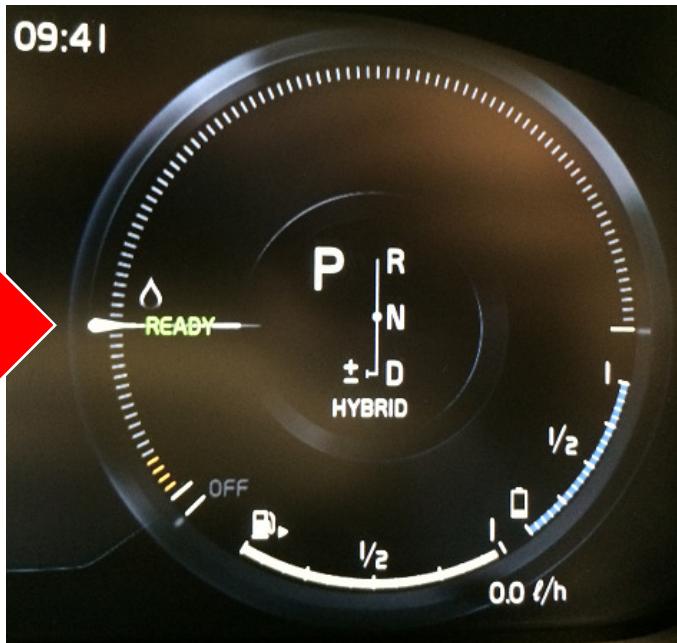
Starting

1. Depress the brake pedal
2. Turn the ignition dial clockwise to START and release it. The ignition control automatically returns to its initial position.
3. The symbol "READY" is glowing green in the display, see next page.



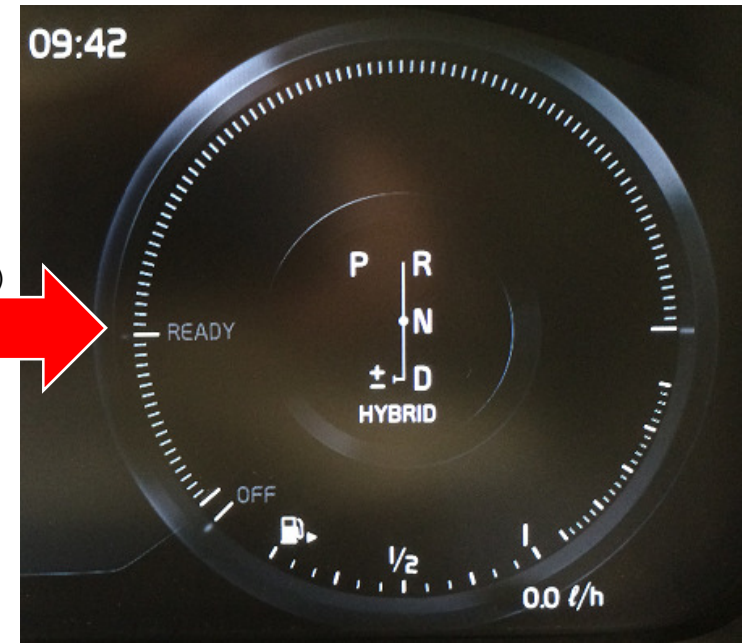
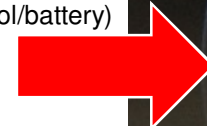
Engine is started (electrical or petrol)

"READY" is glowing GREEN



Engine is OFF

"READY" is gray and no indication of fuel level (petrol/battery)



SWITCH OFF THE ENGINE



Switching off

1. Put the gear selector in P. (Push button)
2. Apply the parking brake
3. Turn the ignition dial to STOP, anticlockwise, and release it.
4. Ensure that engine is shut down by looking at the display, see next page.

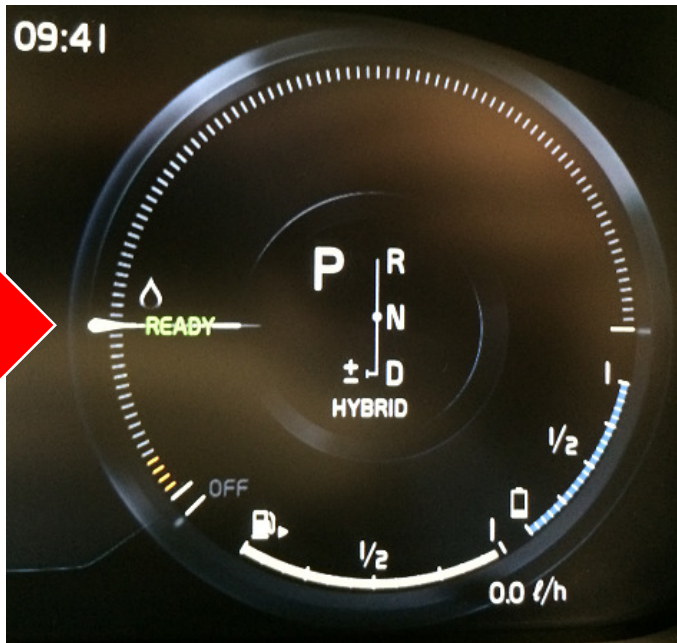


Important to ensure that engine is shut down!
If ignition remains turned on while car is parked
the high voltage and 12V batteries will be flat!



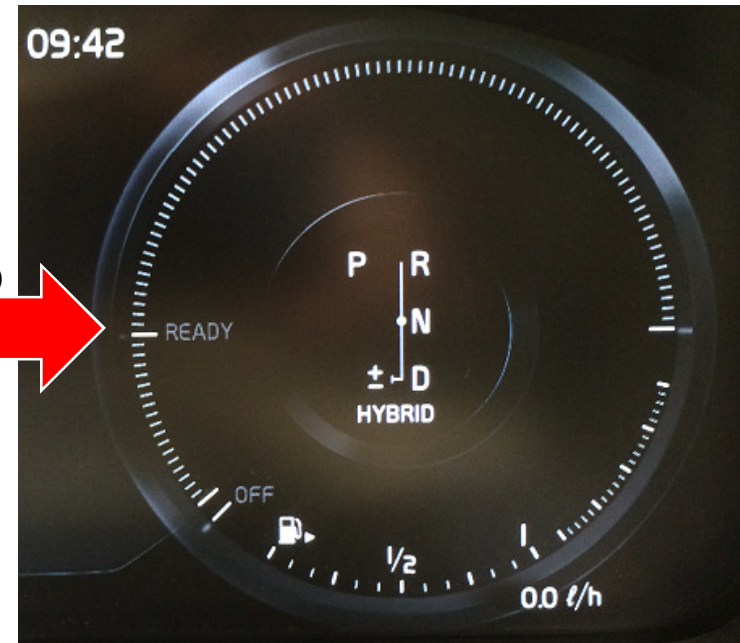
Engine is started (electrical or petrol)

"READY" is glowing GREEN



Engine is OFF

"READY" is gray and no indication of fuel level (petrol/battery)



APPLY THE PARKING BRAKE



1. Put the gear selector in P.
2. Depress the brake pedal.
3. Pull up and release the control.
 - > The symbol in the instrument panel glows steadily when the parking brake has been fully applied.
4. Release the brake pedal and ensure that the vehicle is stationary.



RELEASE THE PARKING BRAKE



1. Depress the brake pedal.
2. Push the control button.
 - > This releases the parking brake and the symbol in the instrument panel will go out.

Low battery voltage

If the 12V battery voltage is too low the parking brake can not be released or applied. Connect a support battery if battery voltage is too low and the parking brake can be released/applied.

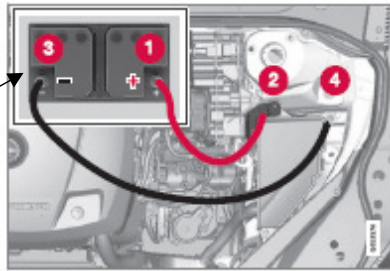




12V BATTERY INFORMATION, JUMP STARTING

Jump starting

Follow the instructions provided here to jump start your vehicle.



Jumper cable connecting terminals

1. Switch the ignition off completely (mode 0).
2. Ensure that the auxiliary battery to be used is 12-volt.
3. If the 12-volt auxiliary battery to be used is in another vehicle, switch off that vehicle's ignition and be sure that the vehicles are not touching each other.
4. Connect one of the red jumper cable's clamps to the auxiliary battery's positive (+) terminal (1).

CAUTION

Connect the jumper cables carefully to avoid short circuits with other components in the engine compartment.

5. Open the cover over the positive (+) jump start terminal (2).
6. Connect the red jumper cable's other clamp to your vehicle's positive (+) jump start terminal (2).
7. Connect one of the black jumper cable's clamps to the auxiliary battery's negative (-) terminal (3).
8. Connect the black jumper cable's other clamp to your vehicle's negative (-) jump start terminal (4).

9. Check that the jumper cables are securely attached to help avoid sparks when the vehicle is started.
10. Start the engine in the assisting vehicle and run it for a short time at approx. 1,500 rpm.
11. Start the engine in your vehicle. If the vehicle does not start, allow an additional 10 minutes of charging time and then try to start the engine again.

NOTE

During normal starts, the electric motor is prioritized and the gasoline engine will not start. This means that when the start knob has been turned toward **START** and released, the electric motor is activated ("started") and the vehicle is ready to be driven. The warning and information symbols in the instrument panel will go out and the chosen theme will be displayed to indicate that the electric motor has been activated.

CAUTION

Do not touch the jumper cable connections while the vehicle is being started. This could generate sparks.

12. After the vehicle has started, carefully remove the jumper cables in reverse order, beginning with the black one.
Ensure that the black jumper cable's clamps do not come in contact with the vehicle's or the auxiliary battery's positive terminals or the red jumper cable's clamps while it is connected.

WARNING

PROPOSITION 65 WARNING!

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

WARNING

- Do not connect the jumper cable to any part of the fuel system or to any moving parts. Avoid touching hot manifolds.
- Batteries generate hydrogen gas, which is flammable and explosive.
- Battery fluid contains sulfuric acid. Do not allow battery fluid to contact eyes, skin, fabrics or painted surfaces. If contact occurs, flush the affected area immediately with water. Obtain medical help immediately if eyes are affected.
- Never expose the battery to open flame or electric spark.
- Do not smoke near the battery.
- Failure to follow the instructions for jump starting can lead to injury.

External jump starting battery/jump starter

Note:
Never use another transported new Volvo car as the 12V donor Battery .

NOTE

The vehicle cannot be started if the hybrid battery is discharged.

CAUTION

The vehicle's jumper cable connecting terminals may only be used to start **your vehicle**. They are not intended to be used to help start another vehicle. If they are used to start another vehicle, a fuse may blow and the terminal will not function.