

VOLVO

Företag/Company name	Dokumenttyp/Type of document		
Volvo Logistics Corp.	Instruction		
Dokumentnamn/Name of document	Utgåva/Issue	Reg nr/Reg. No.	Sida/Page
Volvo C30 Electric - Vehicle handling guide	1	Fie-196	1 (6)
Utfärdat av (avd nr, namn, tfn, geogr plac)/Issuer (dept, name, phone, location)	Sign	Datum/Date	Infoklass/Info class
RM, Helmut Van Damme, +32 9 341 37 72, VL		2011-07-04	
Fastställt av (avd nr, namn, tfn, geogr plac)/Approved by (dept, name, phone, location)	Sign	Datum/Date	Giltig/Valid
Mottagare (avd nr, namn, geogr plac)/Receiver (dept, name, geogr plac)			

Volvo C30 Electric - Vehicle handling guide

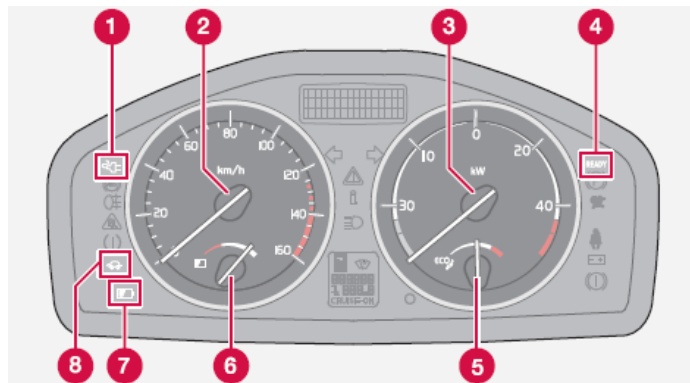
A Volvo C30 ELECTRIC has an electric drive system but is driven and handled in much the same way as a car with a conventional internal combustion engine and automatic transmission.




However, there are some differences that are not too obvious, which are explained in the following pages.

⚠
WARNING

High voltage and danger from electricity! Do not carry out any repairs of your own on this vehicle.

Combi-instrument



	<p>Charging cable (1) Reminds that the charging cable is connected to the electrical socket. The car cannot be driven when the charging cable is connected!</p>
	<p>Ready to drive (4) The green READY lamp means that all systems are ready and illuminates after the remote control key has been turned to its end position and released (as in normal engine starting). Upon driving lamp will fade out.</p>
	<p>Warning for low battery capacity (7) illuminates when the batteries have sufficient energy for approx. 10 km.</p>

Speedometer (2)

Shows the speed of the car.

Note: The speed within transport should never exceed a max limit of 30km/h. Always accommodate speed near ramps and junctions.

Energy consumption (5)

Shows how much current is drawn from the batteries to consumers other than the drive motor. The fewer the functions used the lower the consumption.

Note: Vehicles and their equipment must be used only to such an extent and in such a manner that is necessary (e.g. no radio,...)

Battery capacity (6)

Shows the remaining power supply in the batteries and is equivalent to the "fuel gauge" in a conventional car.

Företag/Company name		Dokumenttyp/Type of document	
Volvo Logistics Corp.		Instruction	
Dokumentnamn/Name of document		Utgåva/Issue	Reg nr/Reg. No.
Volvo C30 Electric - Vehicle handling guide		1	Fie-196
			Sida/Page
			2 (6)

Driving the car

A car with an electrical drive system differs from a fuel-driven car in one essential point - it is totally quiet even when the "engine is running".

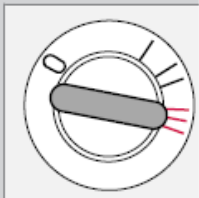
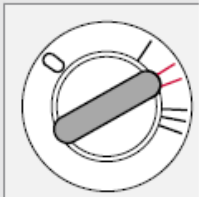


WARNING

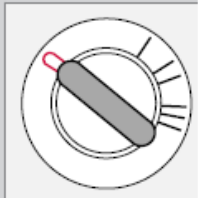
Remember that an electrically-driven car is silent and may therefore be difficult to notice for other vehicle operators, pedestrians or other road users.

Put on your seatbelt and check whether the driver's seat, steering wheel and mirrors are correctly adjusted.

"Starting the engine" and driving

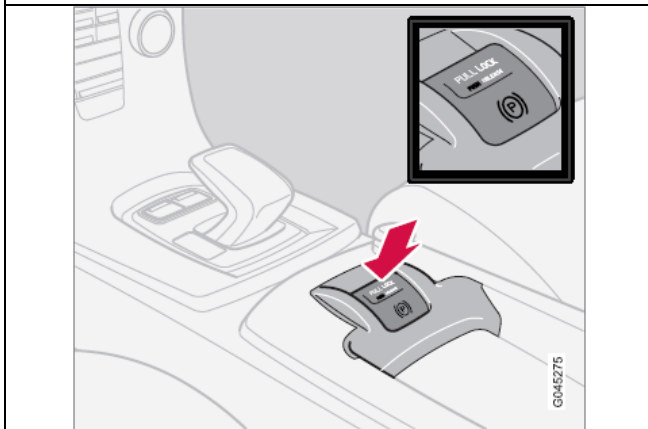
1. Depress the foot brake pedal.
2.  Insert the remote control key in the ignition switch and turn clockwise to key position **III** and release (as with normal engine-starting).
3.  When the indicator lamp **READY** is green the "engine has started"
4. Check that there is sufficient battery capacity for the planned journey
5. Select gear position **D/H** or **R**.
6. Release the parking brake.
7. Release the foot brake and adjust the speed with the "accelerator pedal".

Stopping and parking

1. Stop the car with the foot brake and disengage the "gear" with a gentle push forward on the gear selector - the lamp for gear position changes from **D/H** to **N**.
2.  Apply the parking brake control gently, and turn the remote control key anticlockwise to end position **0** - the car is now parked with parking brake applied, parking lock activated and "engine switched off".

Företag/Company name Volvo Logistics Corp.	Dokumenttyp/Type of document Instruction		
Dokumentnamn/Name of document Volvo C30 Electric - Vehicle handling guide	Utgåva/Issue 1	Reg nr/Reg. No. Fie-196	Sida/Page 3 (6)

Releasing the parking brake

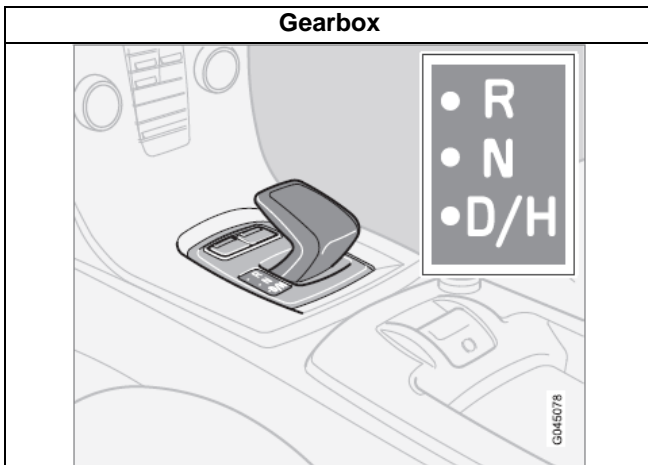


1. Depress the foot brake pedal firmly.
2. Press the control slightly down once and release.



The combined instrument panel's symbol goes out - the parking brake is released.

Gearbox

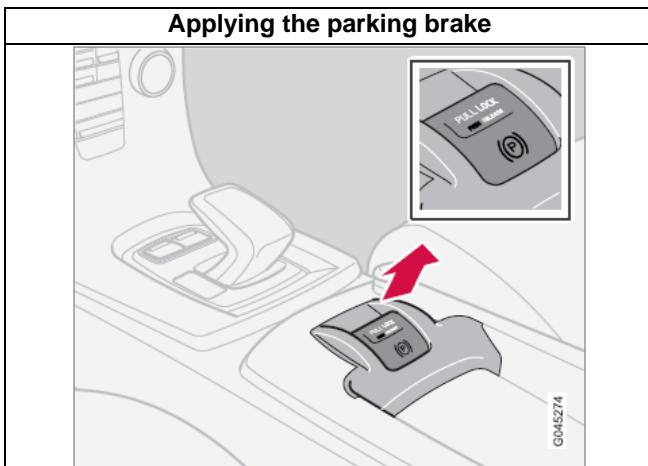


The gear selector has the following positions:

- **R**: Reverse position.
- **N**: Neutral (neutral position).
- **D/H**: Forward drive.

An illuminated lamp at each gear position on the lever panel indicates the gear that is active.

Applying the parking brake



1. Pull the control slightly up once and release.



The brake is applied when the combined instrument panel's symbol illuminates.

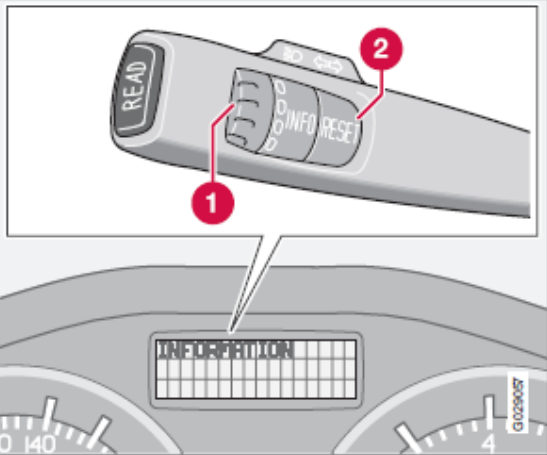
2. Make sure the car is stationary.

Företag/Company name		Dokumenttyp/Type of document	
Volvo Logistics Corp.		Instruction	
Dokumentnamn/Name of document		Utgåva/Issue	Reg nr/Reg. No.
Volvo C30 Electric - Vehicle handling guide		1	Fie-196
		Sida/Page	
		4 (6)	

Charging the batteries	
<p>230 VAC</p> <p>GM45128</p>	<h3>Charging cable</h3> <p>ON (1): The charging cable is activated - the indicator lamp illuminates which verifies that the mains voltage is routed to the car.</p> <p>TEST (2): The charging cable is deactivated. The indicator lamp goes out indicating that the voltage is no longer routed to the car.</p> <div style="background-color: #f0f0f0; padding: 5px;"> <p>! IMPORTANT</p> <p>A spare set of charging cables will be provided per site. In the absence of, use the cable included in the trunk compartment</p> </div>
<p>Electrical socket for 230 VAC and 6/8/10/16 A</p>	<h3>Connect the car to the mains circuit</h3> <p>The car is connected to the 230 V AC mains circuit with the charging cable as follows:</p> <ol style="list-style-type: none"> 1. Connect the charging cable's wall connector into a grounded 230 V AC socket. 2. Open the hatch in the car's grille, and then press the button on the side of the electrical socket's internal protective cap so that it folds up. 3. Then connect the charging cable's plug to the car's electrical socket. 4. Press the ON button (1) on the charging cable's integrated control box - its indicator lamp should then illuminate which verifies that the charging cable is routing mains voltage and that the car's batteries are being recharged.
<p>Indicator lamp for charge status.</p> <p>Z27</p>	<h3>Indicator lamp</h3> <p>During charging, the status of battery charging is indicated with a blue indicator lamp on the windscreen's alarm LED.</p> <ul style="list-style-type: none"> • Constant glow - the batteries are fully charged. • Flashing - the batteries are being recharged. • Off - the batteries are not receiving charge.
<p>GM45131</p>	<h3>Disconnect the car from the mains circuit.</h3> <p>To disconnect the car from the 230 V AC mains circuit:</p> <ol style="list-style-type: none"> 1. Push in the release button on the plug and pull it right out of the car's electrical socket. 2. Close the small inner cover over the connector pins. 3. Close the outer hatch cover. 4. Unplug the charging cable's connector from the 230 V AC socket. 5. Store the charging cable in suitable place in the car.


Företag/Company name	Dokumenttyp/Type of document		
Volvo Logistics Corp.	Instruction		
Dokumentnamn/Name of document	Utgåva/Issue	Reg nr/Reg. No.	Sida/Page
Volvo C30 Electric - Vehicle handling guide	1	Fie-196	5 (6)

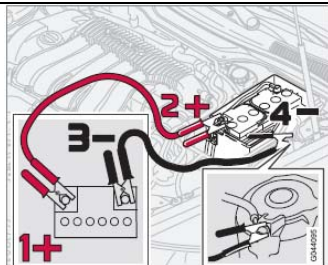
Before the car's electrical system is connected to a grounded 230 V AC mains network it is important that the car's control program receives correct information about the current intensity that the 230 V system has. The setting is made with the left-hand stalk switch thumbwheel.

Charging current								
	<p>Select 6, 8, 10 or 16 A from the menu.</p> <table border="1"> <thead> <tr> <th>Menus/settings</th> </tr> </thead> <tbody> <tr> <td>PRECONDITIONI. TIMER 1</td> </tr> <tr> <td>PRECONDITIONI. TIMER 2</td> </tr> <tr> <td>CHARGING CURRENT 6A</td> </tr> <tr> <td>CHARGING CURRENT 8A</td> </tr> <tr> <td>CHARGING CURRENT 10A</td> </tr> <tr> <td>CHARGING CURRENT 16A</td> </tr> </tbody> </table> <p>Use the left-hand stalk switch thumbwheel (1) to select the fuse value. Briefly press the RESET button (2), the fuse value will start to blink. Scroll to select and confirm with a long press (2 sec.) onto RESET.</p>	Menus/settings	PRECONDITIONI. TIMER 1	PRECONDITIONI. TIMER 2	CHARGING CURRENT 6A	CHARGING CURRENT 8A	CHARGING CURRENT 10A	CHARGING CURRENT 16A
Menus/settings								
PRECONDITIONI. TIMER 1								
PRECONDITIONI. TIMER 2								
CHARGING CURRENT 6A								
CHARGING CURRENT 8A								
CHARGING CURRENT 10A								
CHARGING CURRENT 16A								


Tip

Not all 230 V sockets state their level of fuse protection. If the socket's capacity is unknown, choose one of the lower alternatives - 6 A or 8 A - to avoid the risk that the mains fuse is tripped after a short time. It is better that the batteries receive low and slow charging than no charging at all.


Towing	
<ol style="list-style-type: none">  <p>The remote control key must be in key position II.</p> Set the gear lever in N position. Release the parking brake. 	<p>Consider the following if the car needs to be moved/manoeuvred by hand or towed.</p> <div style="border: 1px solid red; padding: 5px; background-color: #f0f0f0;"> <p>⚠ WARNING</p> <p>The brakes and power steering do not work if the car is de-energised. Approximately 5 times harder pressure on the brake pedal is required and the steering is considerably heavier than normal.</p> </div>

Low battery voltage	
	<p>In case of battery failure due to low battery voltage, the parking brake cannot be released and the gear selector cannot be set in Neutral (N position), electric current can be borrowed from a booster or donor battery and towing pursued.</p>

Företag/Company name		Dokumenttyp/Type of document	
Volvo Logistics Corp.		Instruction	
Dokumentnamn/Name of document		Utgåva/Issue	Reg nr/Reg. No.
Volvo C30 Electric - Vehicle handling guide		1	Fie-196
			Sida/Page
			6 (6)

Fuel filler cap	
 <p>E85 OR Bio-ethanol ONLY!</p>	<p>! IMPORTANT</p> <p>Refuel only with bio-ethanol E85 in the tank Not petrol.</p>

! **WARNING**

 Sections of the car containing high voltage are marked with the adjacent symbol.

Pay attention to the fact that the orange cables carry lethal high voltage.