

# New Opel Astra Electric

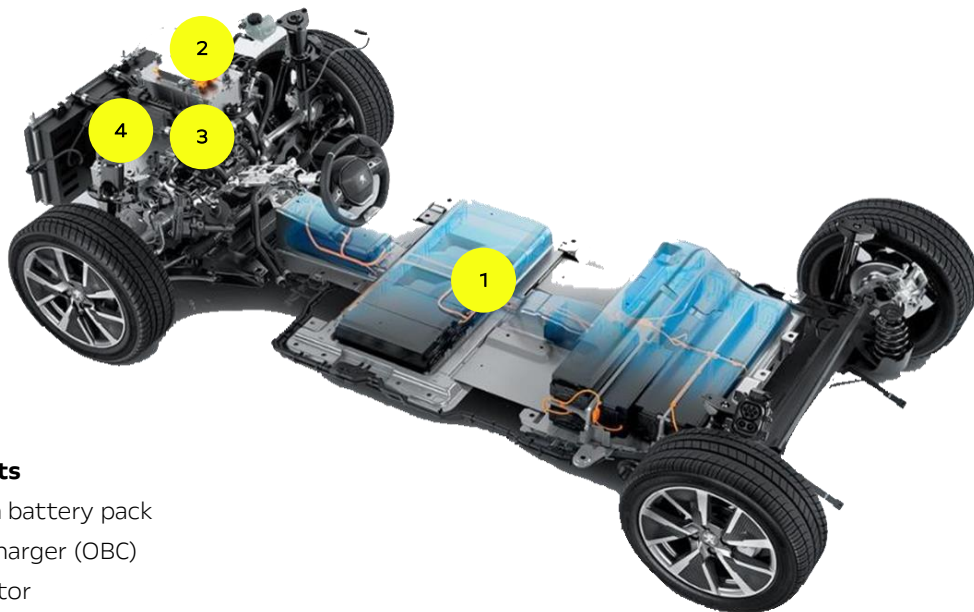
## **ADDITIONAL** HANDOVER BOOKLET

**June 2023**



## New Opel Astra Electric

### OVERVIEW



#### Key Components

1. Lithium-ion battery pack
2. On Board Charger (OBC)
3. Electric motor
4. One speed reduction gear

#### What is a BEV?

A BEV (Battery Electric Vehicle) is run exclusively on electricity via on-board batteries that are charged by plugging into an outlet or charging station. These vehicles have no internal combustion engine.

#### How does a BEV work?

A BEV uses the reduction gear and electric motor utilising the energy stored in the lithium-ion battery pack to deliver strong acceleration and high levels of refinement whilst the integrated on board charger and regenerative braking are utilised to help replenish the battery pack to maximise range, charge times and convenience.

#### How to recharge the battery?

The battery pack is recharged through the on board charger from an external electricity supply and also through the vehicles regenerative braking system when the vehicle is being driven, maximising range and greatly extending the life of the conventional brake discs and brake pads.

## First appointment

### ESSENTIAL HANDOVER

Here are the different steps to take with your customer when getting started.

The topics in **BOLD** are specific to the **ASTRA ELECTRIC** and are covered in this document.

Other items are described in original booklet

#### 0. REMOVING COVERS

##### 1. ACCESS TO THE VEHICLE:

- A. HANDS-FREE ACCESS AND START
- B. OPENING THE BONNET
- C. CHILD LOCKS
- D. OPENING THE TAILGATE
- E. SENSORS/ CAMERA
- F. REAR SEAT ISOFIX / FOLDING
- G. BOOT LAYOUT

##### 2. DEMONSTRATING CHARGING:

- A. CHARGING FLAP
- B. CHARGING CABLES AND TIMES
- C. PLUGGING IN
- D. UNPLUGGING
- E. PROGRAMMABLE CHARGING

#### 3. EXPLORING THE DRIVING POSITION

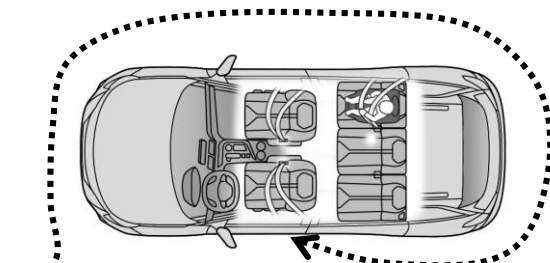
- A. INSTRUMENT / INFOTAINMENT / INFO DISPLAYS
- B. DRIVING MODE
- C. **ELECTRIC DRIVE UNIT**
- D. DRIVING POSITION
- E. STEERING WHEEL CONTROL
- F. ACTIVATION / DEACTIVATION OF ADAS
- G. TOUCH SCREEN
- H. ON-BOARD COMPUTER
- I. REGENERATIVE BRAKING (BRAKE MODE)
- J. DUAL-AREA AUTOMATIC AIR CONDITIONING
- K. THERMAL PRE-CONDITIONING
- L. WIRELESS CHARGER
- M. **TOWING CAPACITY**

#### SMARTPHONE CONNECTION / MYOPEL APP

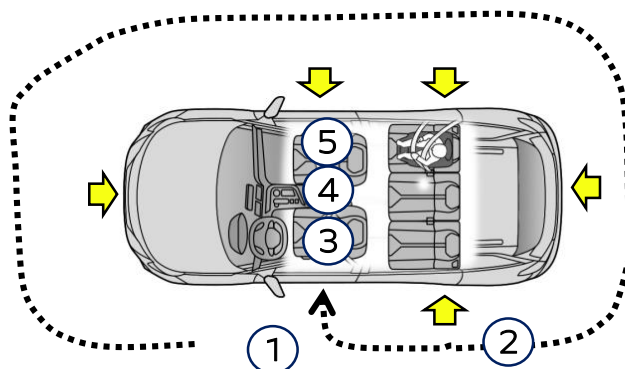
- A. TELEPHONE PAIRING
- B. OPEL CONNECT
- C. MYOPEL APP

#### 4. STARTING

- A. **IGNITION**
- B. **PEDESTRIAN WARNING BUZZER**
- C. **EMERGENCY AND ASSISTANCE SERVICES**



STEP 0



STEPS 1 to 5

# First appointment

## ASTRA ELECTRIC ESSENTIAL HANDOVER SUMMARY

### INTRODUCTION

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### EXPLORING THE DRIVING POSITION

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### STARTING

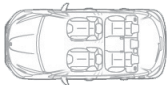
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# New Opel Astra Electric

## CHARGING

STEP

2



Handover agent

Customer

### CHARGING DEMO

The traction Li-ion (Lithium-ion) battery stores the electrical power of the vehicle. It is installed below the rear seats. The battery range varies depending on the driving type, journey, use of interior temperature equipment and components aging.

### CHARGING FLAP OPENING

Show the customer that the charging flap is located on the passenger side of the vehicle.

Have the customer handle the flap opening.



### CHARGING FLAP FEATURES

- 1. Scheduled charge activation button
  - 2. Nozzle lock indicator lamp
- If the lamp is red, the nozzle is adequately positioned and secured in the connector.
- 3. Charging connector
  - 4. Light guides indicating the state of charge



Light Colour	Meaning
White	Welcome light
Blue	Charge on timed
Green flashing	Charging
Green fixed	Charge complete
Red	Malfunction



### CHARGING CABLE AND CHARGING TIME

It is possible to charge the battery with several cables.

The charging cable delivered with the vehicle can be used with the power installations in the country of delivery. In case of any stay abroad, check the compatibility of the charging cable with the local power installations.

**Contact** the Opel network or a qualified workshop to get the appropriate charging cables.

# New Opel Astra Electric

## CHARGING PROCESS

### STEP 2



- Handover agent
- Customer

#### CHARGING CABLE

**Invite** the customer to take the cable out of the boot.

**Show** the customer what the control unit is and explain the meaning of the 3 indicator lamps:

#### POWER :

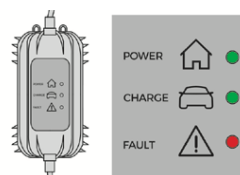
➔ **Fixed green:** POWER

Green: electrical connection established; charging may start.

#### CHARGE:

➔ **Flashing green:** charging in progress or scheduled charging activated.

➔ **Fixed green:** charging completed.



#### FAULT:

If a problem appears or persists with one of the indicator lamps:

- Check that the connections are correctly set up and that the electrical equipment has no faults.
- If the warning lamp does not go off, contact the network or a qualified workshop.

**Note:** when connecting the charging cable to the domestic socket, all of the indicator lamps come on for a moment.

Keep the vehicle plugged in during the handover.

#### CHARGING PROCESS

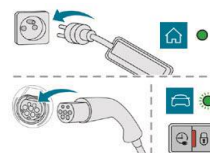
##### DOMESTIC charging

Connect the charging cable to the domestic socket on the box side.

When plugging, all the indicator lamps of the control unit turn on, then the POWER indicator remains fixed green.

#### Process:

- Take the protection lid off the nozzle.
- Insert the nozzle in the charging connector.



The start of the charging process is confirmed by the light guides in the flap and the CHARGE indicator lamp in the control unit flashing green.

Immediate charging is engaged. The nozzle locks in the filler flap (red indicator lamp comes on), if not, it means that the charging process has not started; go back to the beginning of the process by checking that all the connections are accurate.

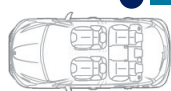
The light guide turning red in the flap means that the nozzle is locked.

DOMESTIC

# New Opel Astra Electric

## CHARGING MODES

### STEP 2



● Handover agent  
■ Customer

### DOMESTIC

#### DOMESTIC charging (mode 2)

The end of charging is confirmed by the **CHARGE** LED turning fixed green on the control unit and by the light guides turning fixed green in the flap.

- After disconnecting, put the protection lid back on the nozzle and close the charging flap.
- Disconnect the charging cable to the domestic socket on the box side.



Cable mode 2 (standard)

#### DOMESTIC Universal charger (mode 2 and mode 3)

- The universal charger allows charging with different kind of sources
- It is compliant to charging currents from 1.8A up to 22A and offers different adapters for the different sockets.



Universal charger (as accessory)

### PUBLIC

#### PUBLIC Fast charging (mode 3)

- Follow the use instructions of the fast-charging box.
- Take the protection lid off the nozzle.
- Insert the nozzle in the charging connector.



The start of the charging process is confirmed by the light guides in the flap flashing green, if not, it means that the charging process has not started; go back to the beginning of the process by checking that all the connections are accurate. The light guide turning red in the flap means that the nozzle is locked.

**Note:** once charging has started, the calculation of the charging time appears in the control unit (may take up to 20 seconds). Such information disappears when the vehicle is dead locked and an update is available each time it is unlocked.



Cable mode 3 (as accessory)

#### PUBLIC Direct DC charging (mode 4)

- Follow the use instructions of the fast-charging box .
- It is the direct current charge up to 200A, 400V. With this system it is possible to recharge the vehicles in a few minutes, the charger is external to the vehicle and the cable directly to the charging station



#### Disconnection

Before disconnecting the charging connector nozzle:

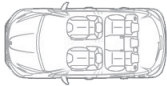
- If the vehicle is unlocked, **lock it then unlock it.**
- If the vehicle is locked, **unlock it.** The red light guide turning off in the flap confirms that the charging nozzle is unlocked.
- Disconnect the charging nozzle within **30 seconds.**

# New Opel Astra Electric

## CHARGING

STEP

2



Handover agent

Customer

### PROGRAMMABLE CHARGING


By default, charging starts as soon as the nozzle is connected. Scheduled charging may be programmed.

**Explain** that Programmable charging is only possible when charging at a domestic electrical outlet or a reeinforced/ Green'Up socket or a wall box.

Programmable charging is also available via the MyOpel App.





**Setting** the wanted charging time on the touchscreen

#### Activation

- Select charging
- Define number of hours and minutes of charging required
- Touch OK
- Plug in the vehicle
- Within one minute press 
- Status indictaor illuminates blue to show that programmable charging is active



### CHARGING TIMES (20 – 80%)

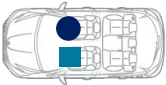
DOMESTIC socket	DOMESTIC Wall Box	PUBLIC AC charger	PUBLIC DC charger
			
Mode 2 cable	Mode 3 cable	Mode 3 cable	Fixed DC cable
2.2kW => 15h50	7.4kW => 4h40	22kW => 3h10	≥100kW => 26m
Reinforced socket 3.2kW => 11h10			



# New Opel Astra Electric

## INSTRUMENT / INFOTAINMENT / INFO DISPLAYS

STEP  
3



● Handover agent

■ Customer

Have the customer operate the controls of the head-up display and explain the features and the ability to add a personalised widget.

Show the various displays within the instrument cluster and Driver Info Display, pointing out that the flows relate to the driving modes and the colours relate to the driving situation:

- Blue = electric driving
- Green = energy recovery



**Motor stopped**



**Motor on**



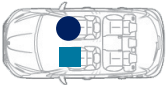
**Vehicle accelerating**

# New Opel Astra Electric

## INSTRUMENT / INFOTAINMENT / INFO DISPLAYS

STEP

3



● Handover agent

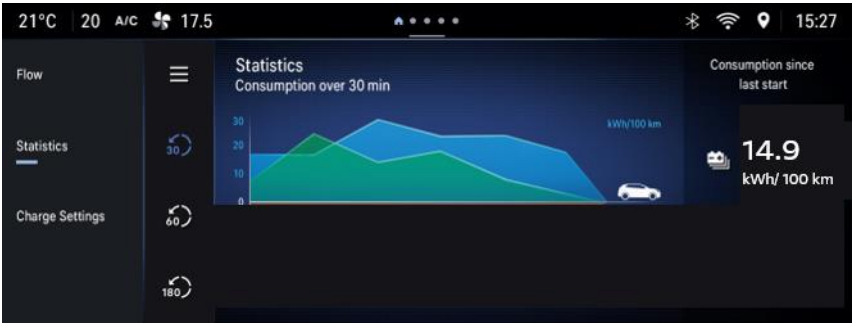
■ Customer



Vehicle braking

Show the customer the graph that highlights electricity consumption, detailing:

- Average power consumption (kWh/100km) on current trip and historical figures
- Energy consumed from the traction battery – blue graph
- Energy regenerated during deceleration and braking to replenish battery – green graph



Opel Connect

Explain that energy consumption data is available remotely via the "MyOpel" app.



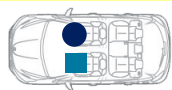
Show the new Opel Connect feature of EV Trip Planner that is newly available.



# New Opel Astra Electric

## DRIVING MODES / ELECTRIC DRIVE UNIT

### STEP 3



● Handover agent  
■ Customer

### Driving Modes

**Explain** to the customer the driving modes and how they are differentiated from each other:

- **ECO** – when wanting to maximise efficiency / range. Power **limited to 80kW**, HMI feedback and climate control is set to ECO mode.
- **NORMAL** – default setting for good balance between efficiency / range and other vehicle functions. The **power is limited to 100kW** and the vehicle reverts to NORMAL on start up.
- **SPORT** – to maximise driving enjoyment. Power steering weight increases, HMI feedback is maximised and the **available power is maximum of 115kW**.



### Important:

Being in ECO or NORMAL mode and using the **kick down function** the **engine always deliver the max. power of 115kW**. Releasing the gas pedal the vehicle **automatically switches back** to the original mode.

### Electric Drive Unit

**EXPLAIN** that the vehicle uses an electric drive unit with a 1 gear transmission. **Show** the positions and **explain** that the selector will always return to the centre position.

- **P** – this position locks the wheels, to shift out the brake pedal should be depressed and the desired mode selected. P is automatically selected when drivers door is open and speed is less than 5 km/h and when ignition is switched off.
- **R** – denotes reverse and can only be selected when vehicle is at a standstill and brake pedal is depressed.
- **N** – neutral and no power can be transferred to the front wheels.
- **D** – This mode is for normal driving. To shift into and out of D, the vehicle must be at standstill and the brake pedal has to be depressed.
- **B** - vehicle speed is significantly reduced by releasing the accelerator pedal without operating the brake pedal. Use B when driving down steep hills, in deep snow, in mud or in stop-and go traffic. To activate B, select D and press button B To deactivate B, press button B.



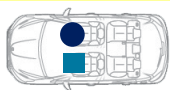
### Towing Capacity

**Explain** that Astra electric has the capacity to tow up to **80kg**

## New Opel Astra Electric

### STARTING

#### STEP 3



- Handover agent
- Customer

#### Ignition

- Press the brake pedal fully.
- Keep your foot on the pedal.
- Press the START/STOP button for approximately 2 seconds.
- Keep the brake pedal depressed until READY is displayed in the Driver Information Centre and an acoustic signal is given.



#### Pedestrian Warning Buzzer

**Explain** that the system warns pedestrians of the vehicle's arrival when it is running..

The audible pedestrian warning system operates as soon as the vehicle is set in motion and up to 30 km/h, both forward and reverse.





**THANK YOU**

