D	Änderungen bezüglich Konstruktion, Ausstattung, Farbe sowie intum vorbeheiten. Angaben und Abblidungen unverbindlich.	D	Einbauanleitung
GB	Subject to change in terms of construction, equipment and colour, and may contain errors. The information and illustrations are non-binding.	GB	Installation instructions
F	Sous réserve de modifications de la construction, de équipement, de la couleur et sous réserve d'erreurs. Les indications et les illustrations sont sans engagement.	F	Consignes de montage
NL	Wijzigingen met betrekking tot constructie, uitvoering en kleur evenale vergissingen voorbehouden. Gegevens en afbeeldingen niet bindend.	NL	Montagehandleiding
<b>OK</b>	Ændringer med hensyn til konstruktion, udstyr, farver samt føjl forbeholdes. Oplysninger og illustrationer er uforpligtende.	<b>OK</b>	Montagevejledning
	Endringer angående konstruksjon, utetyr, førge og felitagelse forbeholdes. Opplysninger og illustrasjoner uforbindtlig.	$(\mathbf{N})$	Monteringsinstruksjon
<b>S</b>	Med reservation för ändringar vad det gäller konstruktion, utrustning, färg samt för misstag. Uppgifterna och bilderna är inte bindande.	\$	Installationsanvisning
FIN	Pidätämme olkeuden rakennetta, varustusta, väriä koskeviin sekä erehdyksestä johtuviin muutoksiin. Tiedot ja kuvat elvät ole sitovia.	FN	Asennusohje
	Con riserva di modifiche relative a progettazione, dotazione, colore ed errori. Le Indicazioni e figure sono fornite sensa impegno.		Istruzioni per il montaggio
E	Reservadas las modificaciones respecto a diseño, equipamiento, color, así como error. Indicaciones y figuras sin compromiso.	E	Instrucciones de montaje
P	Reservamos o direito de alterações relativamente ao desenho, equipamento, cor, bem como de erfo. Os dados e as gravuras não implicam compromisso da nossa parte.	P	Instruções de montagem
(GR)	Διατυπώνουμε κάθε επιφύλαξη ως προς αλλαγές σε σχέση με κατασκευή, εξοπλισμό, διαρρύθμιση, χρωματισμούς και λάθη παραδρομής.	GR	Οδηγίες εγκατάστασης
CZ	Změny, týkající se konstrukce, vybavení, barvy, jakož i omyly jsou vyhrazeny. Údaje a vyobrazení jsou nezávazné.	CZ	Návod k montáži
PL	Zastrzega się prawo do zmian dot. konstrukcji, wykończenia, kolorystyki oraz pomyłek. Dane i liustracje niewiążące.	P	Instrukcja montażu
TR	Tasarım, donanım və rənk bakımından değişiklik yapma hakkı və hata və əksiklik mahfuzdur. Vərilər və rəsimlər bağlayıcı dəğildir.	TR	Montaj talimati
H	A szerkezet, a kivitel és a szín változtalása, valamint a változások joga fenntartva. Az adatok és az ábrák nem köteleiző érvényűek.	H	Beépítési útmutató
HR	Pravo promjena u svezi konstrukcije, opreme, boje kao i zabune oridžavamo. Podaci i ilustracije su neobavezne.	HR	Upute o ugradnji
BUL	Запазени права по отношение на конструкцията, обзавеждането, џвета и грешки. Данните и изображенията не са обвързващи.	®	Инструкция за монтаж
RO	Ne rezervăm dreptul unor modificări ale construcțieu, dotării, culorii și dreptul la erori Datele indicate și imaginile sunt crientative.	RO	Instrucțiuni de montaj
RUS	Права на внесение изменений относительно конструкции, оснащения, окраски, а также на ошибки сохраняются. Данные и иллюстрации имеют примерный характер.	RUS	Инструкция по монтажу и установке
Ū	Pasillekama konstrukcijos, įrangos bel reikmenų, spalvos pakeitmų ir klaidų teisė. Duomenys ir liistracijos neįpareigojantys.	Ū	Montavimo informacija
(I)	Tiek paturētas tiesības uz konstrukcijas, iekārtu, krāsu izmaiņām, kā arī kjūdīšanos. Dati un attēli bez saistībām.		lemontēšanas pamācība
B	Konstruktsiooni, varustuse ja voervi osas muudatused ning eksimine lubatud. Andmed ja joonised on mittesiduvad.	(BT)	Paigaldusjuhend
<u>slo</u>	Zadržana pravica do sprememb glede konstrukcije, opreme, barve ler pomote. Podatki in elike so neobvezne.	(SLO)	Navodilo za vgradnjo
SK	Zmeny, ktoré sa týkajú konštrukcie, vybavenia, farby, ako aj omyly sú vyhradené. Údeje a zobrazenia sú nezáväzně.	SK	Montážny návod

# Water Heater Unit

Thermo	Top E Additional Heater
Thermo	Top C Additional Heater
Thermo	Top P Additional Heater

# Installation Instructions

# **Opel Antara**

3.2 Gasolinefrom Model Year 2007Left-hand drive vehicleAutomatic transmission



WARNING!

Hazard warning:

Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.

Specialist company training, technical documentation, specialized tools and equipment are required to install and repair Webasto heating and cooling systems.

NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills, or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.

ALWAYS follow all Webasto installation and repair instructions and observe all warnings.

Webasto does not accept any liability for defects and damage that are attributable to installation by untrained staff.





00 0104

Ident. No.: 1311938A\_EN

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#### Validity

Manufacturer	Model	Туре	EG-BE No./ABE
Opel	Antara	L-A	e4 * 2001 / 116 * 0118

Engine type	Engine model	Output in kW	Displacement in cm <sup>3</sup>
10HM	Gasoline	167	3195

Vehicle and engine types, equipment variants and national specifications not listed in these installation instructions have not been tested. However, installation according to these installation instructions may be possible.

The installation location of a digital timer and summer/winter switch should be confirmed with the end customer before installation.

#### Heater Unit/Installation Kit

Quantity	Description	Order No.:
1	Opel-specific heater unit delivery scope	See Opel price list
1	Installation kit for Opel Antara (basic kit)	1311919A
1	Additional kit for Opel Antara 3.2 liter Gasoline	1311922A

#### **Optional heater control:**

Quantity	Description	Order No.:
1	Heater control	See Opel price list

#### Also required with automatic air-conditioning:

Quantity	Description	Order No.:
1	Kit for Opel Antara with Automatic Air-Conditioning	1311923A

#### Heater unit recommended for the respective vehicle class:

Vehicle	Heater unit
Compact car	Thermo Top E
Mid-size car, station wagon	Thermo Top C
Full-size car, van, offroader	Thermo Top P

The selection of the heater unit is based on the passenger compartment size of the vehicle and the level of comfort required by the customer!

#### Foreword

These installation instructions apply to Opel Antara vehicles with a 3.2 Gasoline engine and a manual transmission

- for validity, see page 2 - from model year 2007 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to these installation instructions.

However, the stipulations in the "installation instructions" and "operating and maintenance instructions" for the *Thermo Top C/P/E* must always be observed.

The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

#### **General Instructions**

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties.

Sharp edges should be fitted with edge protectors (split-open plastic hose).

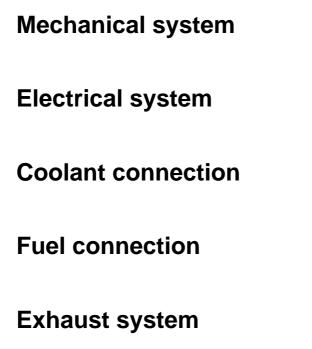
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

#### **Special Tools**

- Torque wrench for 2.0 10 Nm
- Hose clamping pliers
- Metric Thread-Setter Kit

#### **Explanatory Notes on Document**

To provide you with a quick overview of the individual working steps, you will find an identification mark on the outside top right corner of the page in question.



**Combustion air** 

$\langle \gamma \rangle$	

Special features are highlighted using the following symbols:









Specific risk of injury or fatal accidents.

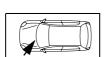
Specific risk of damage to components.

Specific risk of fire or explosion.

Reference to general installation instructions of Webasto components or to the manufacturer's vehiclespecific documents.



Reference to a special technical feature.



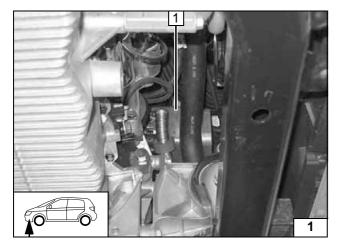
The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

#### **Preliminary Work**

#### WARNING!

- Disconnect the battery "earth" or "ground" connection.
- Depressurize the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Completely remove the battery
- Remove the fuse and relay box
- Remove the engine cover
- Remove the engine control unit
- Disconnect the power-steering fluid reservoir
- Disconnect the expansion tank
- Remove the charge-air tube between the air filter and the turbocharger
- Disconnect the air hose from the charge-air tube to the engine at the engine
- Remove the filler neck of the window washer system
- Remove the vent line at the top to the coolant expansion tank
- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.
- Remove the underride protection
- Open the left tank mounting service lid
- Remove the A/C control panel according to the manufacturer's instructions (only with manual airconditioning)
- Remove the glove compartment (only with automatic air-conditioning)

Remove page 29 "Operating Instructions for End Customer" and add to the vehicle operating instructions.

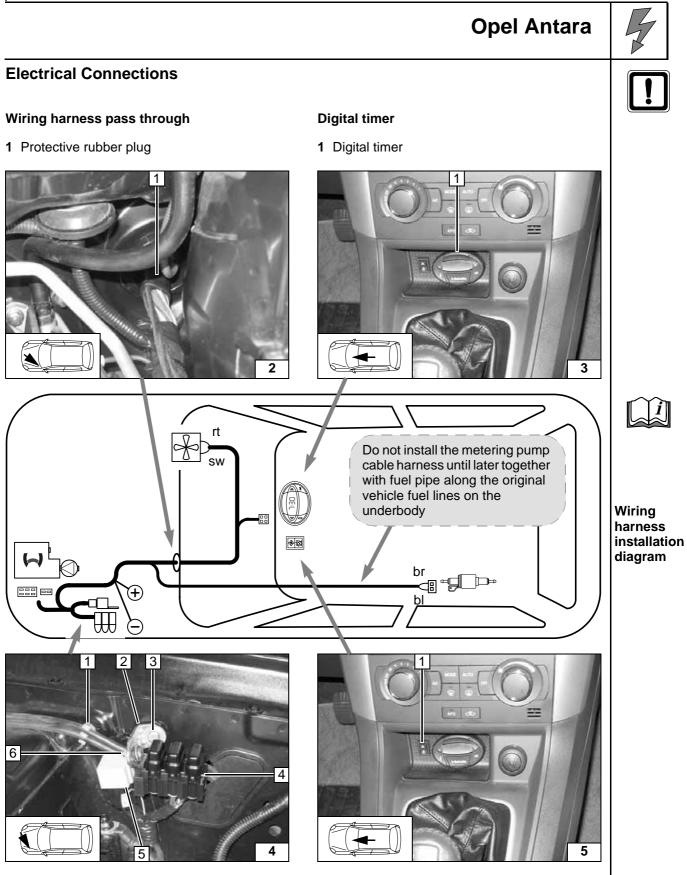


#### Heater unit installation location

1 Heater unit

Installation location





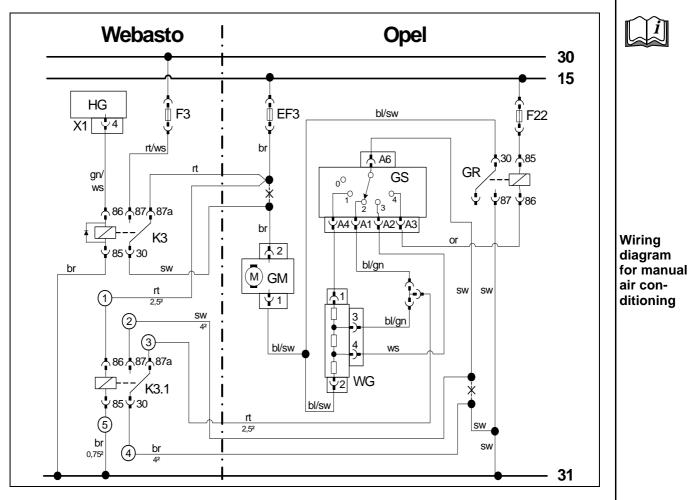
#### Fuse holder, relay K3

- 1 Move original vehicle clip
- 2 Angle bracket
- **3** Drill out hole to 9 mm dia., mount M6 rivet nut, M6x20 bolt, spring lockwasher
- 4 Fuse holder
- 5 K3 relay
- 6 Align M5x16 bolt, large diameter washer, M5 flanged nut to right in oblong hole

#### Summer/winter switch option

1 Summer/winter switch, drilled hole 12 mm dia.

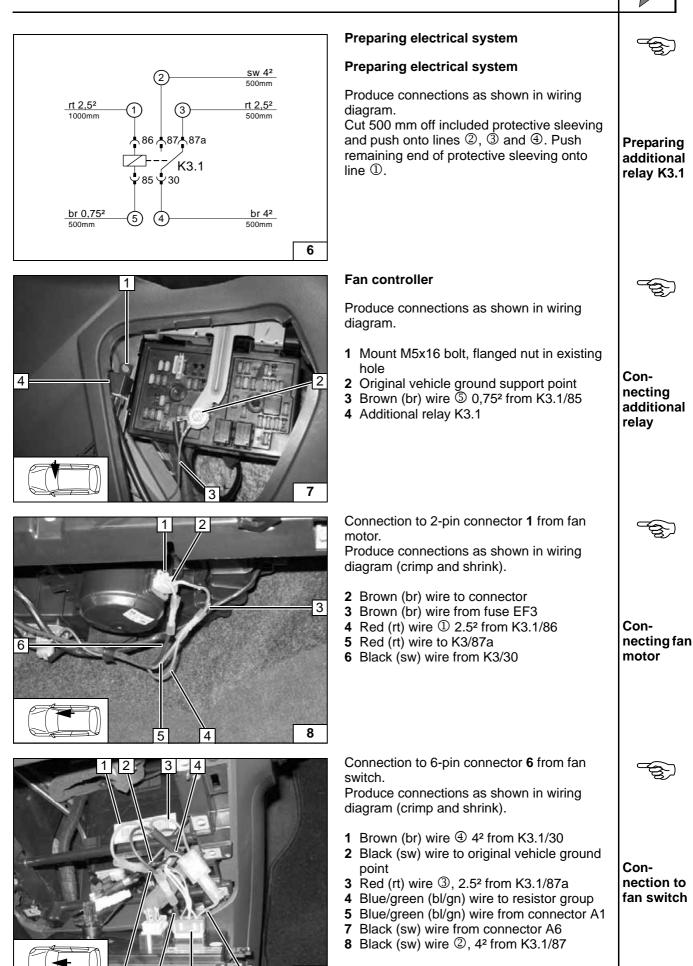
## Fan controller for manual air conditioning



Webasto components		Comp	Components of Opel Antara		Colors and symbols		
HG	Heater unit TT-C/E	GM	Fan motor	rt	red		
X1	6-pin connector	GS	Fan switch	WS	white		
F3	Fuse, 25 A	EF3	40 A fan fuse	SW	black		
K3	Fan relay	WG	Resistor group	br	brown		
K3.1	Additional relay	GR	Fan relay	gn	green		L
				bl	blue		
				or	orange		
				Х	Cutting point		
				Wirin	g colors may vary.		

Legend





9

#### **Opel Antara** Automatic air-conditioning fan controller Opel Webasto I 30 15 HG F3 EF3 X1 4 ¥ F22 rt/ws br gn/ ws rt GM M) **Å**87a 86 📥 87 📥 K3 br 85 30 Automatic sw air-conbr ditioning circuit (1)rt 2,5² diagram br (2)vi br 4² gr/sw br (5)4² 3 2 <u></u>4 86 **≜**87≜87a R1 (t GR K3.1 A1 A5 /30 85 (6)KΒ S٧ 4 sw B1' в br br 0,752 4² sw 31 Webasto components **Components of Opel Antara Colors and symbols** Heater unit TT-C/E GM Fan motor red HG rt X1 GR 6-pin heater unit Fan controller ws white connector F3 KΒ Fuse, 25 A Air-conditioning control sw black element K3 F22 Fuse 10A br Fan relay brown K3.1 Additional relay EF3 Fuse 40A gn green Legend R1 0.9 ohm resistor А Connector for A/C bl blue control panel В Connector for A/C GR gray

control panel

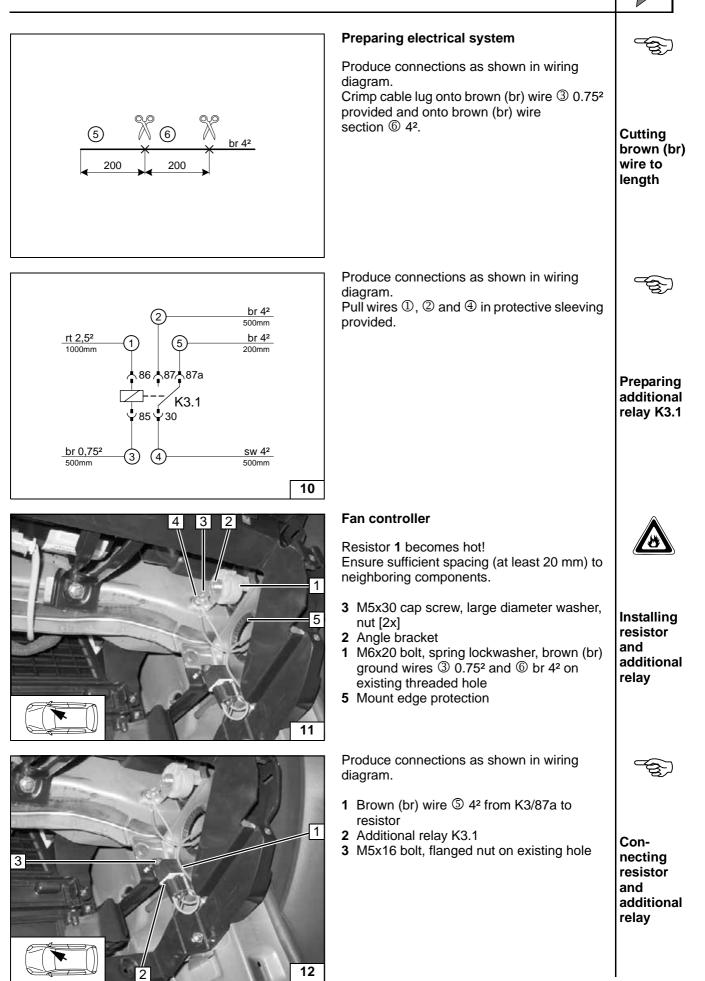
vi

Х

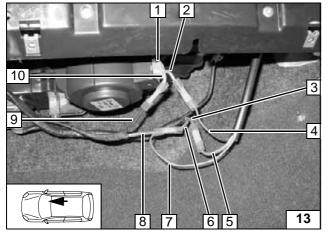
violet

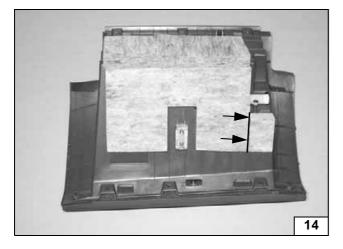
Cutting point Wiring colors may vary.











Connection to 2-pin connector 1 from fan motor.

Produce connections as shown in wiring diagram (crimp and shrink).

- 2 Violet (vi) wire from connector
- **3** Violet (vi) wire to fan controller
- 4 Black (sw) wire ④, 4<sup>2</sup> from K3.1/30 5 Brown (br) wire ② 4<sup>2</sup> from K3.1/87

- 6 Brown (br) wire (1) 4- norm K3.1/87
  6 Brown (br) wire from fuse EF3
  7 Red (rt) wire (1) 2.5<sup>2</sup> from K3.1/86
  8 Red (rt) wire to K3/87a
- 9 Black (sw) wire from K3/30

**10**Brown (br) wire to connector

Cut away **insulation** of glove compartment at marking.

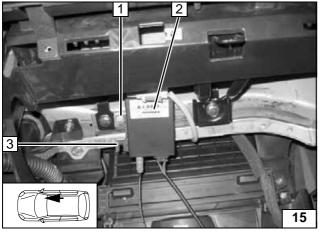
Connecting fan

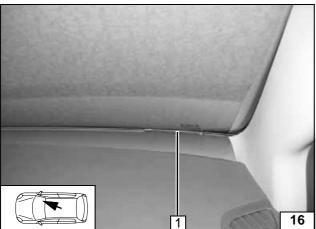
motor

Cutting away insulation





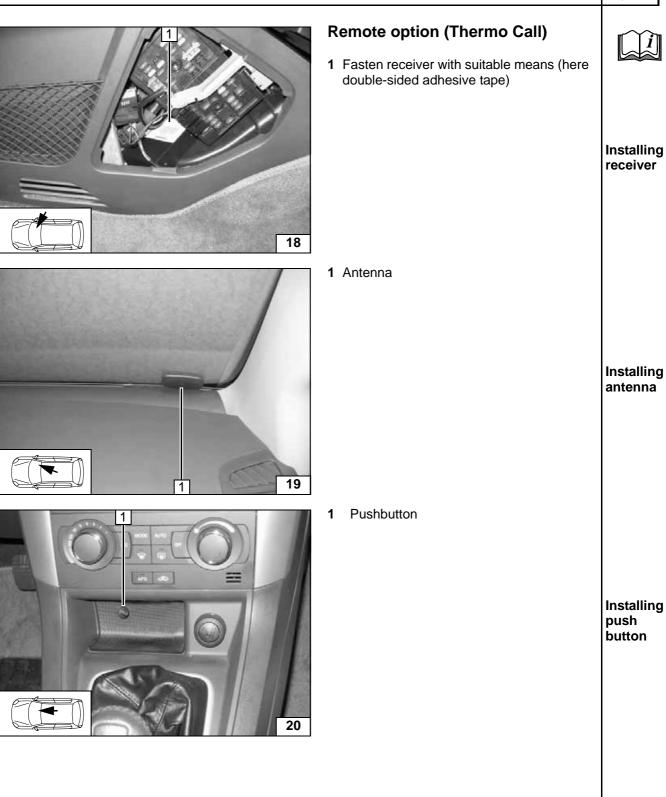


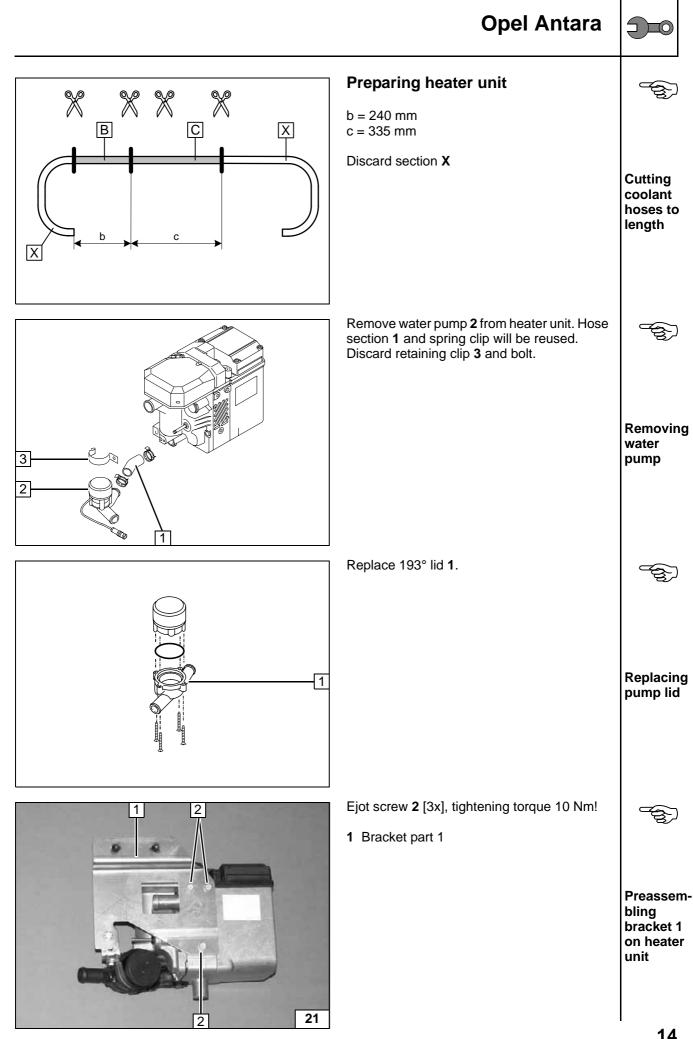


# 

ŝ	Remote option (Telestart)	
	<ol> <li>Existing hole, M5x16 bolt, washer, flanged nut</li> <li>Receiver</li> <li>Telestart bracket</li> </ol>	
		Installing receiver
	1 Antenna	
1		Installing antenna
1	Temperature sensor for HTM100 only	
	<ol> <li>Fasten temperature sensor with suitable means (here double-sided adhesive tape)</li> </ol>	
0		Installing tempera- ture sensor







- 1 M6x12 bolt, angle bracket, M6 flanged nut
- 2 Water pump
  - 3 Rubber-coated pipe clamp, 48 mm dia.
  - 4 M6x20 bolt, M6 flanged nut

Preassembling water pump

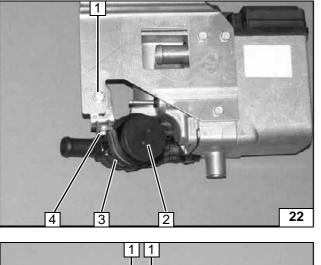
 $\int \Box = 0$ 

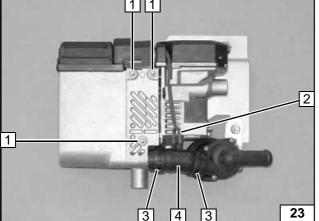
Ejot screw 1 [3x], tightening torque 10 Nm! Connect adapter line of water pump 2, cut to length and connect identical colors to wiring harness of water pump using connectors (crimp and shrink).

- **3** Existing spring clip [2x]
- 4 Existing hose section

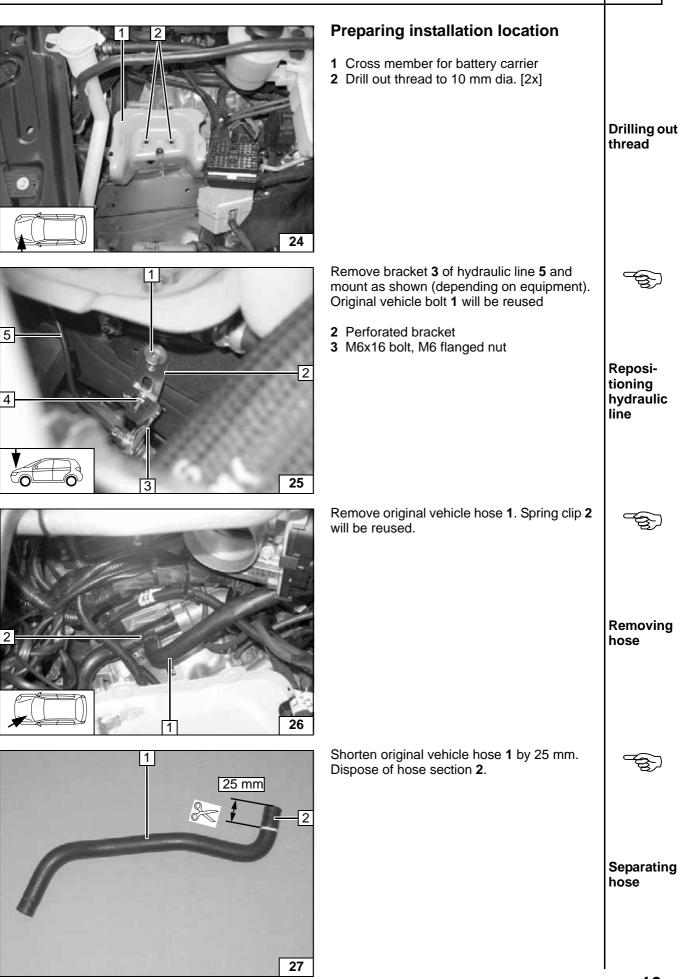
Preassembling heater unit

Top

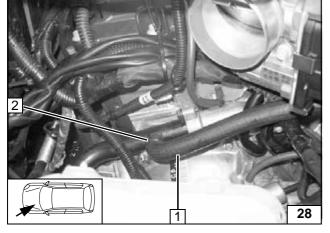


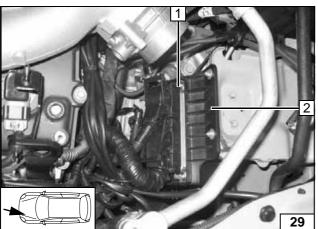


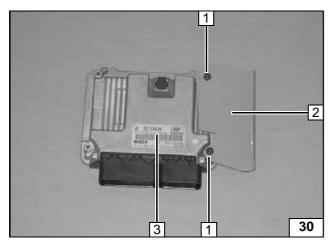
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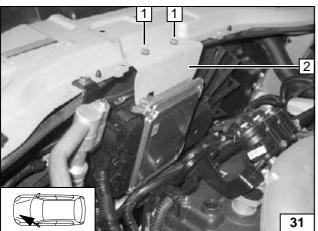


- 2



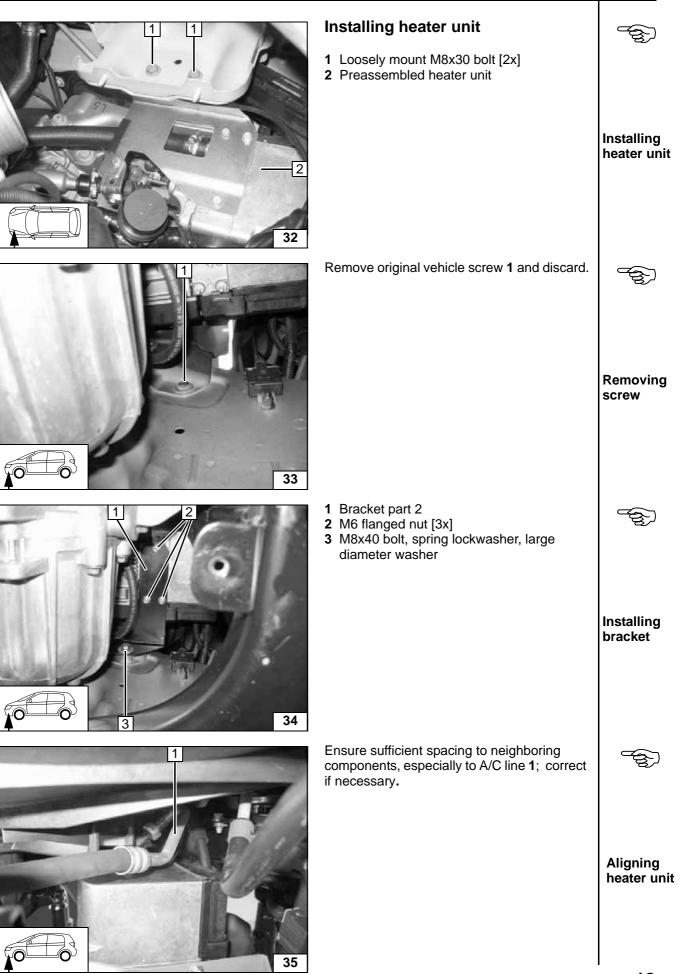






	Opel Antara	
	Original vehicle hose Original vehicle spring clip	
		Re- mounting hose
	ompletely remove control unit <b>1</b> with bracket Discard bracket <b>2</b> .	
		Removing control unit
2	Self-tapping Torx screw [2x] Additional bracket Control unit	
		Preassem- bling control unit
	M6x20 bolt, spring lockwasher [2x each] on existing threaded holes Additional bracket with control unit	
		Installing control unit

 $\Box 0$ 



## **Coolant connection**

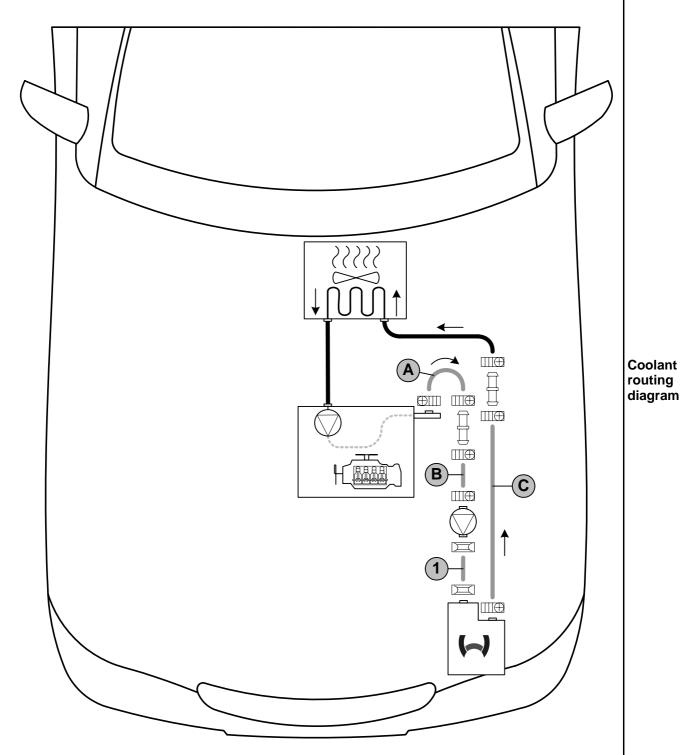
#### WARNING!

Tighten all hose clamps to 2.0 + 0.5 Nm.

Any coolant running off should be collected using an appropriate container!

Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position hose clamps and spring band clamps so that no other hose can be damaged.

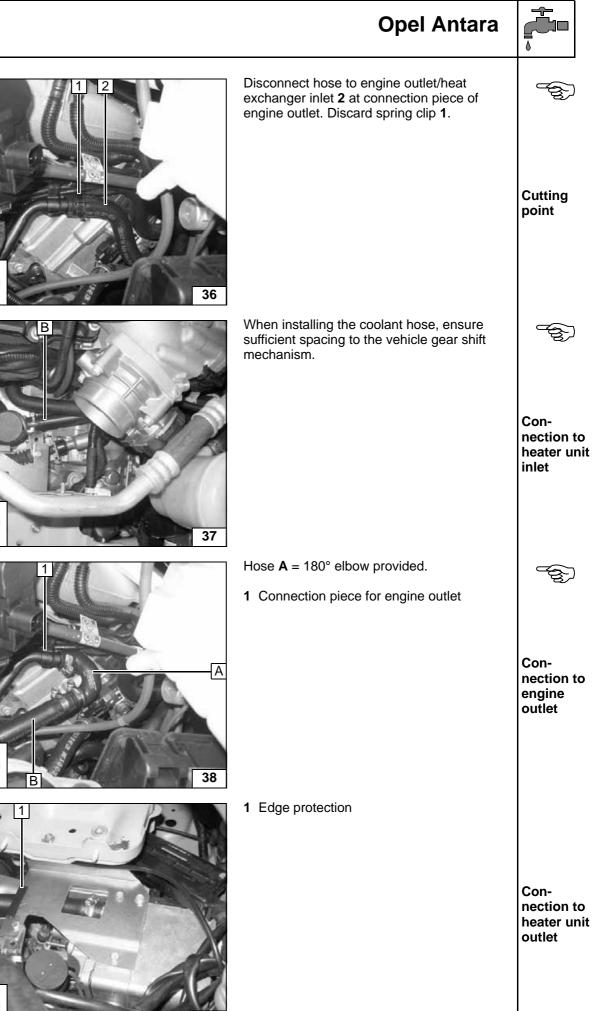
The connection should be "inline" based on the following diagram:



All spring clips  $\square = 27$  mm dia.! All connecting pipes  $\square \square = \emptyset$  18x20. All hose clamps  $\square \square = 20-27$  mm dia.! **1** = hose section between circulating pump and heater unit. **A** = 18 mm dia. 180° molded hose.

<del>Z</del>



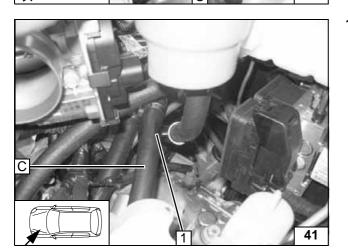


Before connecting, fill the coolant hoses with coolant.

1 Hose section of heat exchanger inlet

Connection to heat exchanger inlet

(fgg



1 Spacer bracket

40

Installing spacer bracket

#### **Fuel Connection**

#### **CAUTION!**

Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

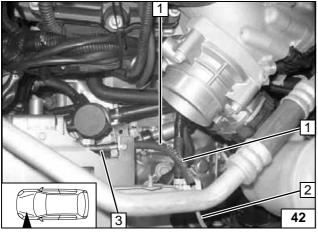
Catch any fuel running off with an appropriate container.

Install fuel line and metering-pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties. Mount the fuel line and wiring harness with rub protection on sharp edges.

#### WARNING!

6

The fuel line and wiring harness are routed to the metering pump in as shown in the wiring harness routing diagram.



- 43
  - 1 Mecanyl fuel pipe and metering pump cable harness

1 Included hose section as scuff guard [2x]

**3** Hose section, 10 mm dia. hose clamp [2x]

2 Mecanyl fuel line

Ensure proper installation position of metering pump 3, see "Installation Instructions". Installation location in front of vehicle fuel tank!

1 5 mm shim

44

- 2 Angle bracket
- 4 Rubber-coated pipe clamp
- 5 Silent block, flanged nut [2x]
- 6 Original vehicle nut



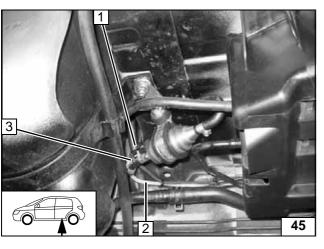
Connection on heater unit

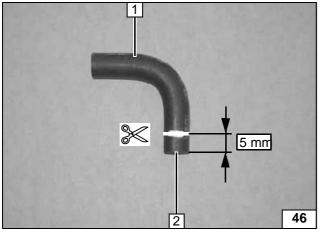
Installing lines

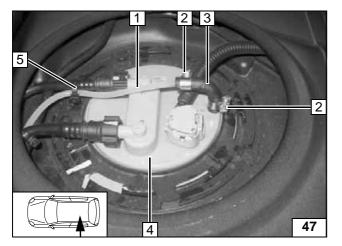
Installation location of metering pump

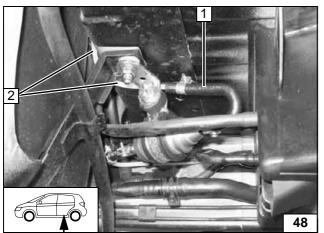




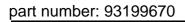




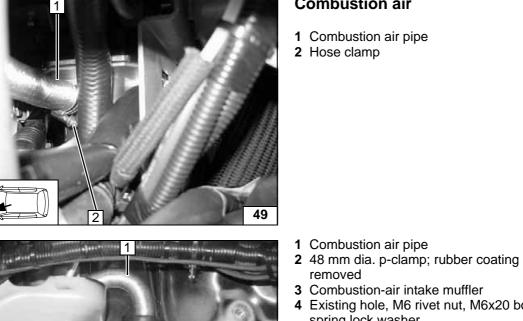




Connect fuel line 2 from heater unit to pressure side of metering pump [side with connector]. 1 Wiring harness of metering pump, connector mounted 3 Hose section, 10 mm dia. hose clamps Installing [2x]. metering pump 1 Separate 90° molded hose at marking 2 Discard section Preparing fuel standpipe Cut closure off existing removal connection 3 piece and push on short end of 90° molded hose 3. 1 Fuel line 2 10 mm dia. hose clamp [2x] 4 Fuel sender 5 Cable tie Removing fuel Fuel line 2 from fuel standpipe on intake side 3 of metering pump [side without connector]. Check the position of the components; adjust if necessary. Check that they have free clearance. 1 180° molded hose, 10 mm dia. hose Conclamp [2x] nection to metering pump



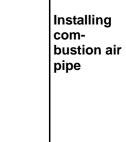
4



50

3

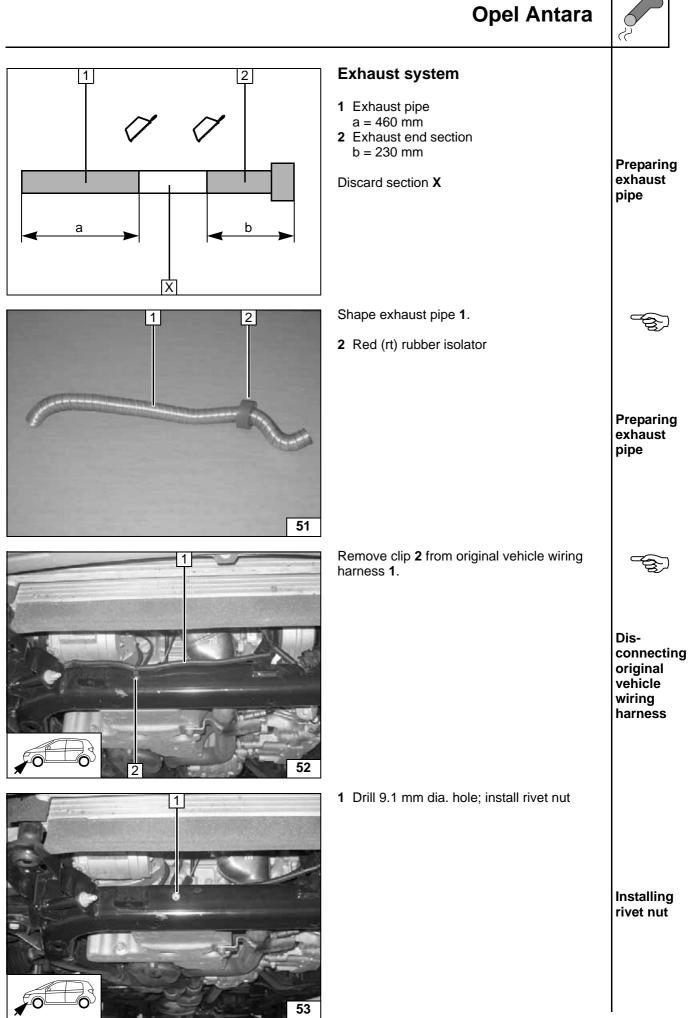
**Combustion air** 

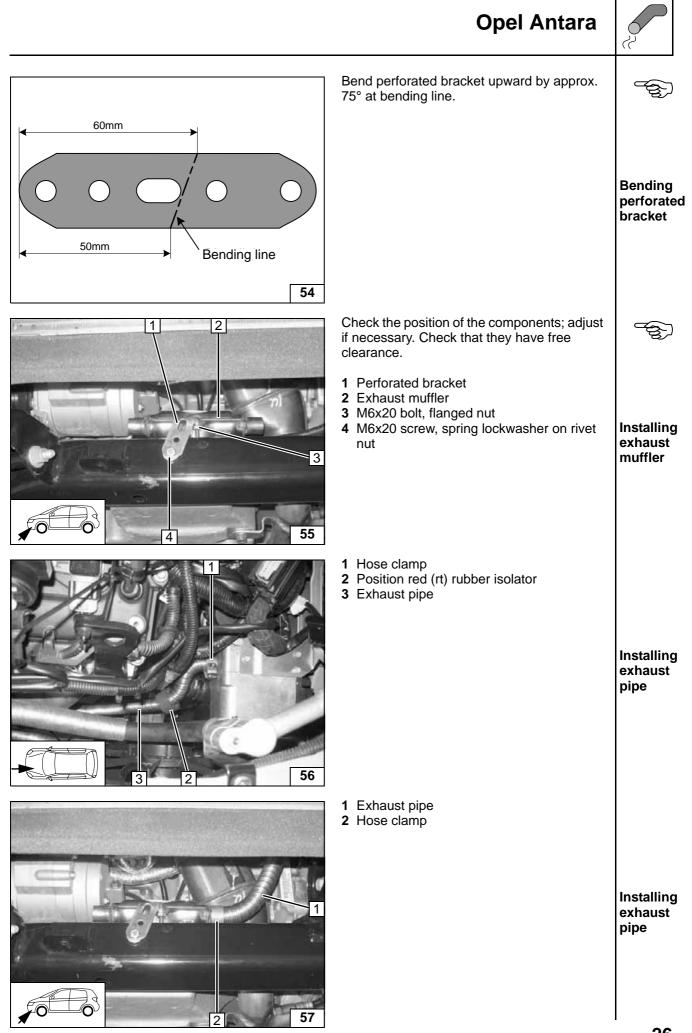


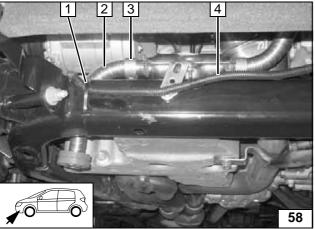
A

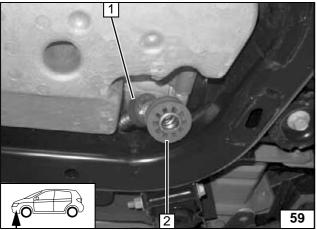
- 3 Combustion-air intake muffler
- 4 Existing hole, M6 rivet nut, M6x20 bolt, spring lock washer

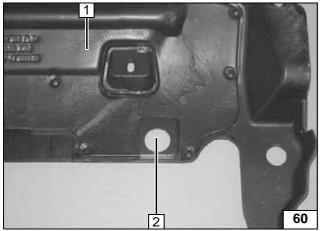
Installing muffler











Opel Antara	
Ensure sufficient spacing to neighboring components (wiring harness to exhaust system).	- fig-
<ol> <li>Cable tie</li> <li>Exhaust end section</li> <li>Hose clamp</li> <li>Original vehicle wiring harness</li> </ol>	Installing exhaust end section
<ol> <li>Red (rt) rubber isolator</li> <li>Red (rt) rubber isolator with groove</li> </ol>	
	Pushingon rubber isolator
<ol> <li>Underride protection</li> <li>42 mm dia. hole</li> </ol>	The second secon
	Cutting out underride protection
Align red (rt) rubber isolator <b>2</b> with groove flush on exhaust end section <b>3</b> and on underride protection <b>1</b> .	- ftp
	Mounting rubber isolator

#### **Final Work**

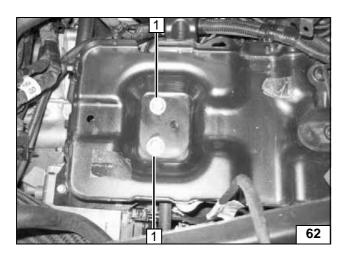
#### WARNING!

Reassemble the disassembled components in reverse order.

Check all hoses, hose, spring and Caillau clamps, as well as all electrical connections for firm seating. Secure all loose cables using cable ties.

Only use manufacturer-approved coolant.

Spray the heater unit components with anti-corrosion wax (Tectyl 100K, Order No. 111329).



1 M8x30 bolt, spring lockwasher, flanged nut [2x each]

- Connect the battery
- Bleed and fill the coolant circuit according to the vehicle manufacturer's specifications.
- Set the digital timer.
- Set the manual air conditioning or automatic air conditioning according to the "operating instructions for the end customer".
- Check the proper operation of the additional heater, see the operating instructions/installation instructions.
- Attach the "Switch off additional heater before refueling" sticker to the left-hand B-pillar.





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Installing battery carrier

#### **Operating Instructions for End Customer**

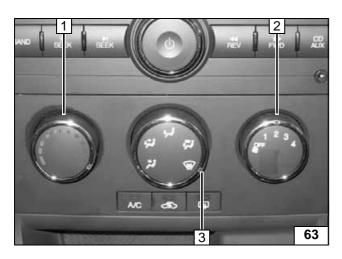
Please remove page and add to the vehicle operating instructions.

Note:

We recommend matching the heating time to the driving time. Heating time = driving time **Example:** For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

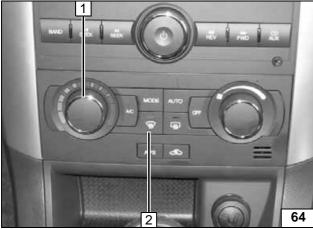
If the summer/winter switch option has been installed, this must be switched in accordance with the time of year. The heater unit will then only switch on the vehicle fan to ventilate the vehicle interior in the position Winter wheat and in the position Summer S.

Before parking the vehicle, make the following settings:



- 1 Set temperature to "max."
- 2 Set fan to level "1", or possibly "2"
- 3 Direct air outlet toward windshield

Manual air conditioning



- 1 Set temperature to "max."
- 2 Air outlet to windshield

Automatic air-conditioning