

Water Heater

Thermo Top Evo Parking Heater



Short Installation Documentation

Ford Focus

"Standard" Fan Controller

Validity

Manufacturer	Model	Type	EG-BE-No. / ABE
Ford	Focus	DYB	e13 * 2007 / 46 * 1138 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.0 EcoBoost	Petrol	SG	74	998	M2DA
1.0 EcoBoost	Petrol	SG	74	998	M2DC
1.0 EcoBoost	Petrol	SG	92	998	M1DA
1.0 EcoBoost	Petrol	SG	92	998	M1DD
1.5 TDCi	Diesel	6-speed SG	88	1499	XWDA/ XWDB/ XWDC/ XWDD
2.0 TDCi	Diesel	AG	110	1997	T7CE

SG = manual transmission
AG = automatic transmission

from model year 2015
Left-hand drive vehicle

Verified equipment variants: Automatic air-conditioning

Not verified: Passenger compartment monitoring

Ford Focus

Table of Contents

Validity	1	Preparing Electrical System	4
Necessary Components	2	Electrical System	7
Installation Overview	2	Fan Controller for Automatic Air-Conditioning	8
Information on Validity	2	A/C Control Panel Installation Instructions	10
Technical Information	2	"Standard" Automatic A/C Operating Instructions	13
Explanatory Notes on Document	3		
Preliminary Work	3		

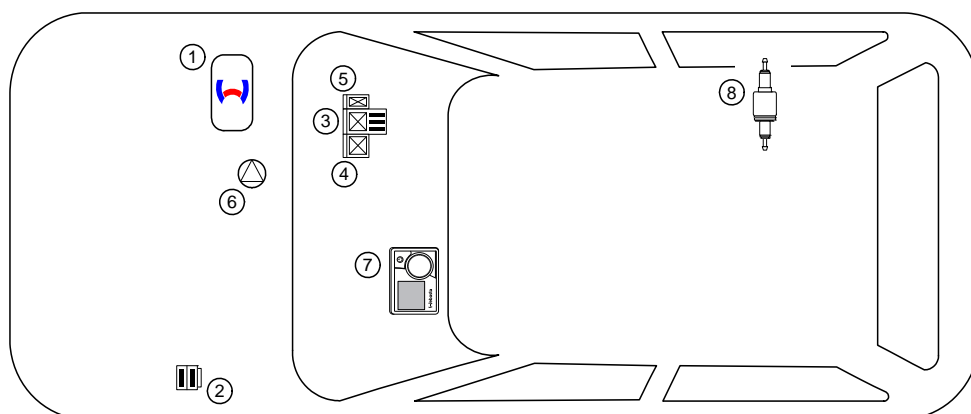
Necessary Components

- Additional kit for Fan Controller Ford Focus PWM GW: **1324049A**

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Passenger compartment relay and fuse holder
4. PWM GW
5. K2 relay
6. Circulating pump
7. MultiControl CAR
8. Metering pump



Information on Validity

This short installation documentation applies to:

- Ford Focus petrol vehicles with installation kit **1324046A** and installation documentation **1324047A** or
- Ford Focus diesel vehicles with installation kit **1323872A** and installation documentation **1323873A** or **1323874A**

For the validity, see page 1 - from model year 2015 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 this installation documentation.

Technical Information

Special Tools

- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Webasto Thermo Test diagnosis with current software

Dimensions

- All dimensions are in mm

Tightening torque values

Tighten bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art- technology.

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.

Electrical System



Special features are highlighted using the following symbols:

Specific risk of damage to components.



Specific risk of injury or fatal accidents.



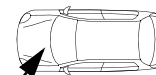
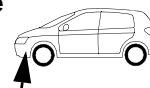
Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.



Reference to a special technical feature.



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



Tightening torque according to the manufacturer's vehicle-specific documents



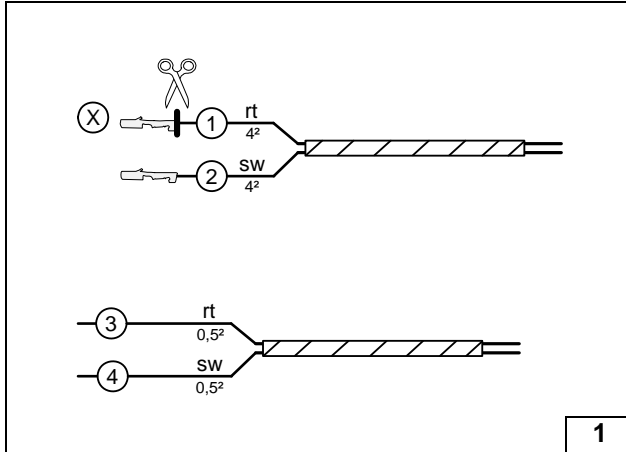
Preliminary Work

Vehicle



- Disconnect the battery.
- Remove the lower footwell trim on the front passenger's side.
- Remove the glove compartment.
- Remove the centre tunnel trim strip (see installation instructions).
- Remove the trim piece over the A/C control panel (see installation instructions).
- Remove the A/C control panel frame (see installation instructions).





Preparing Electrical System

Wire sections retain their numbering in the entire document.

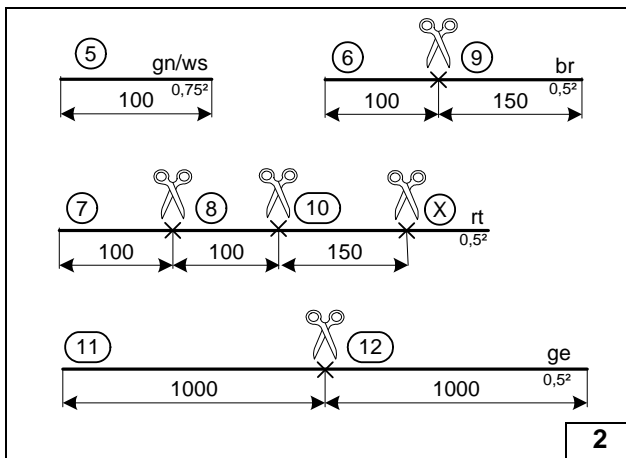
Produce all following electrical connections as shown in wiring diagram.

Discard section X.

- ① Red (rt) wire of fan wiring harness
- ② Black (sw) wire of fan wiring harness
- ③ Red (rt) wire from wiring harness of PWM control
- ④ Black (sw) wire from wiring harness of PWM control



Cutting to length / preparing wires

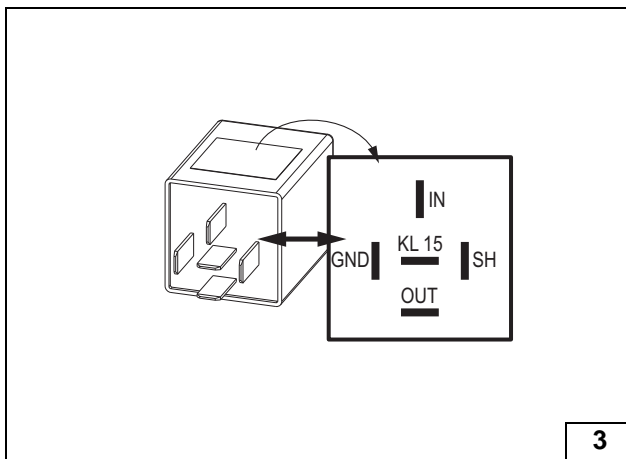


Discard section X.

Pull wires ⑪ and ⑫ into supplied protective sleeving.



Cutting to length / preparing wires



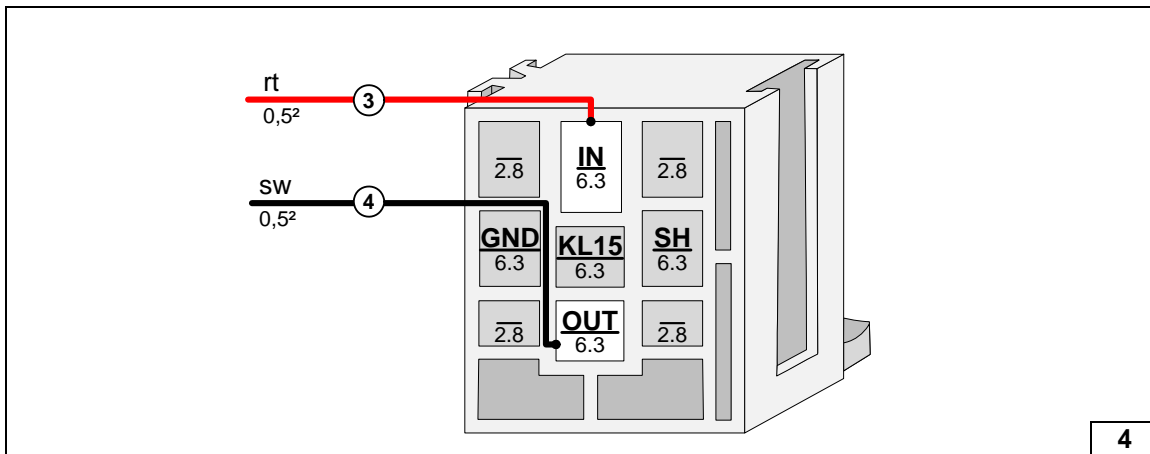
Check the PWM Gateway settings when starting up the heater and adjust if necessary.

Settings:

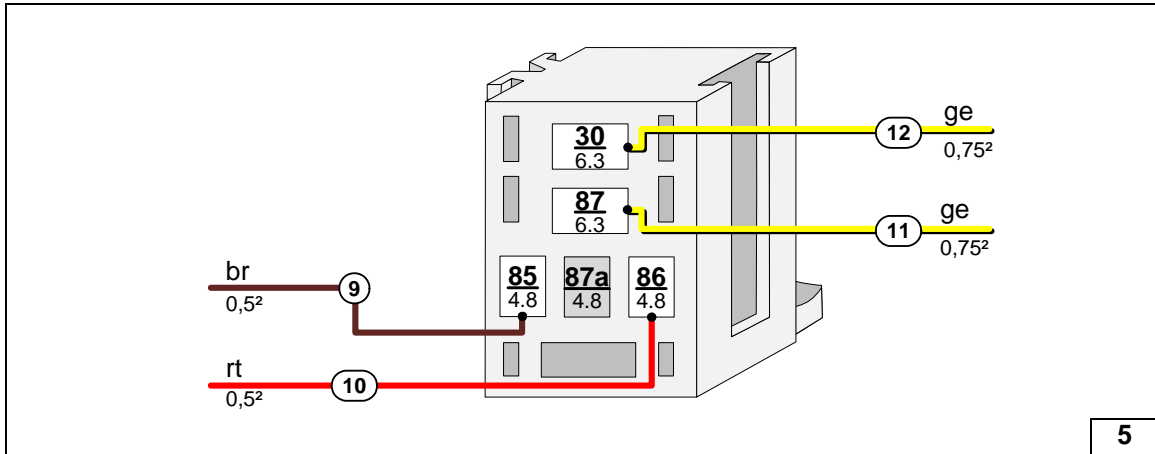
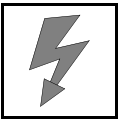
- Duty cycle: 37%
- Frequency: 400Hz
- Voltage: not relevant
- Function: Low-side



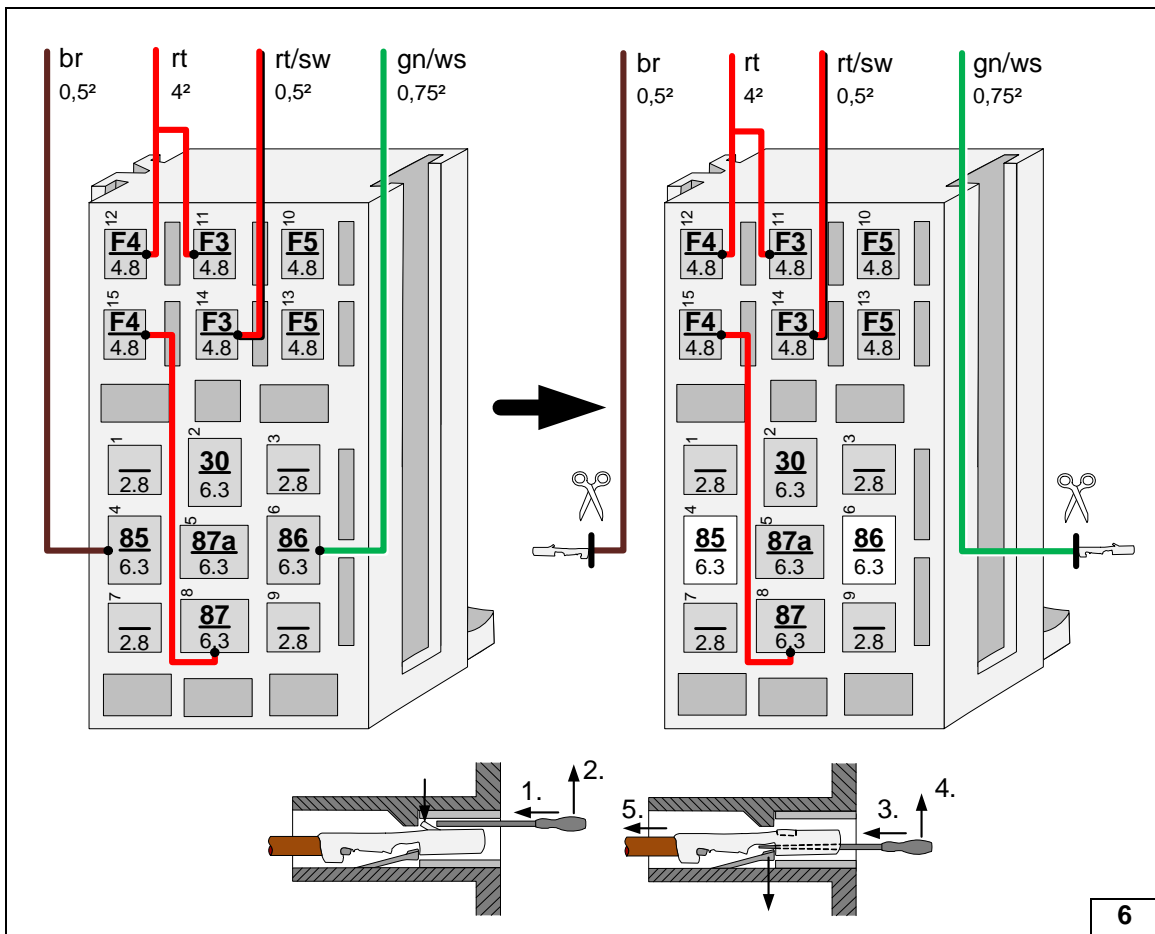
View of PWM GW



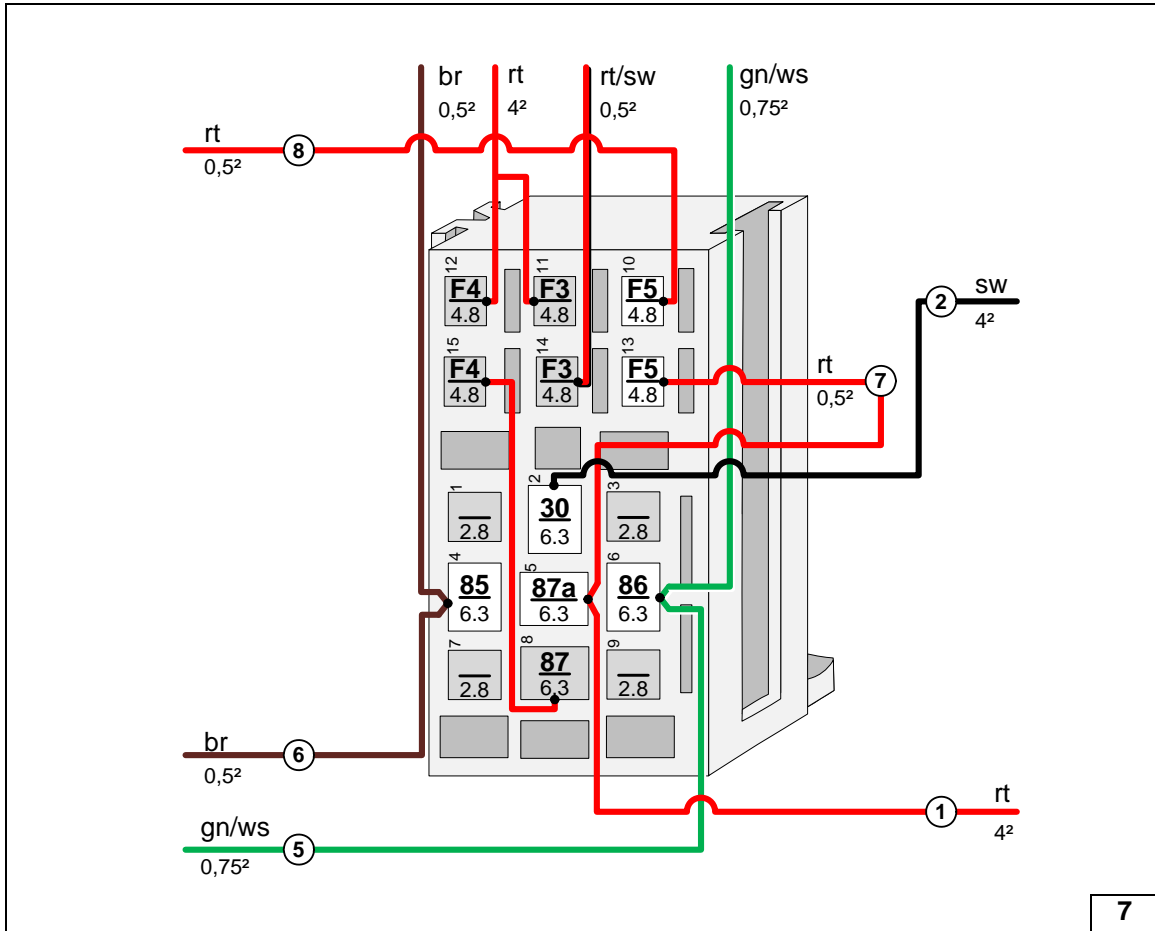
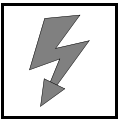
Connecting wires to PWM GW socket



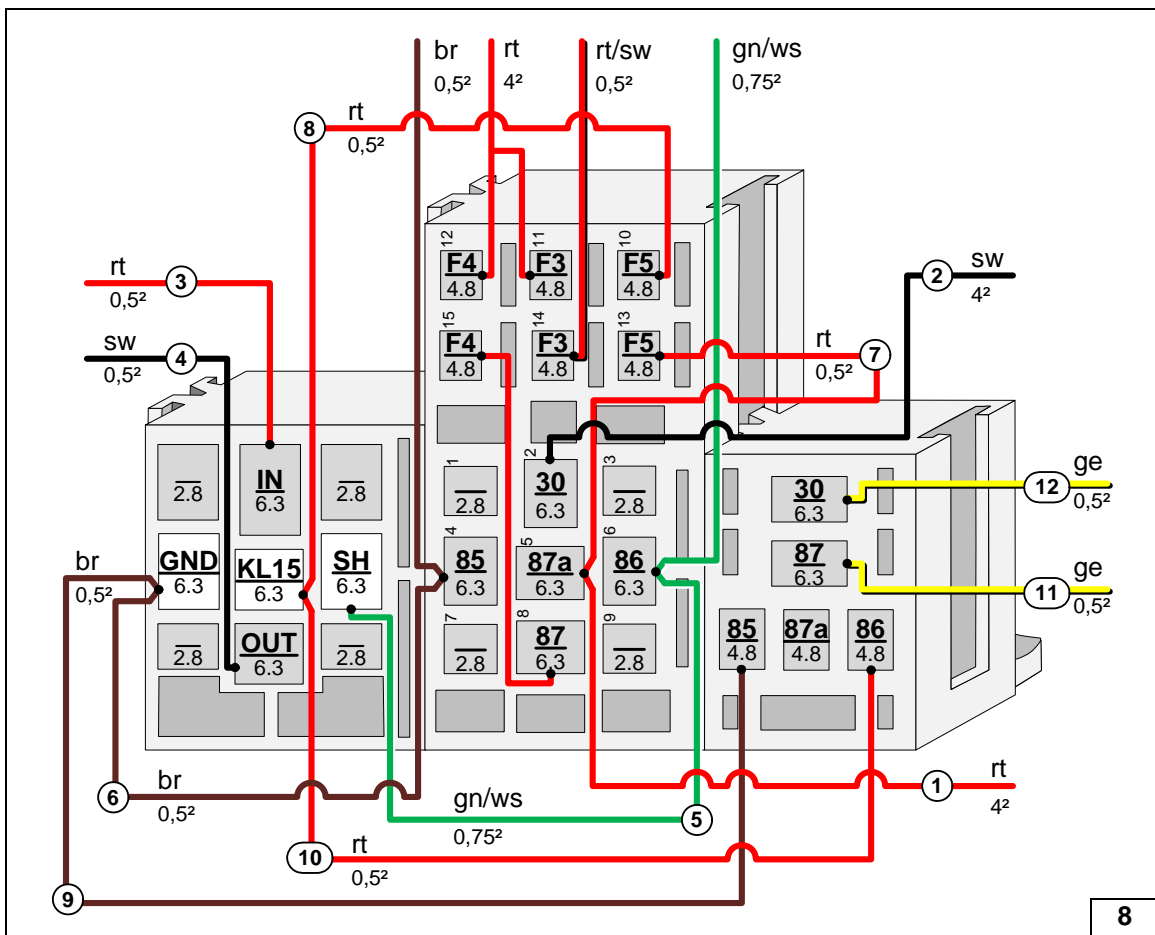
Connecting wires to socket of K2 relay



Preparing relay and fuse holder of passenger compartment



Connecting wires to relay and fuse holder of passenger compartment



Interlocking PWM GW socket, K2 relay and passenger compartment relay and fuse holder, connecting wires



Electrical System

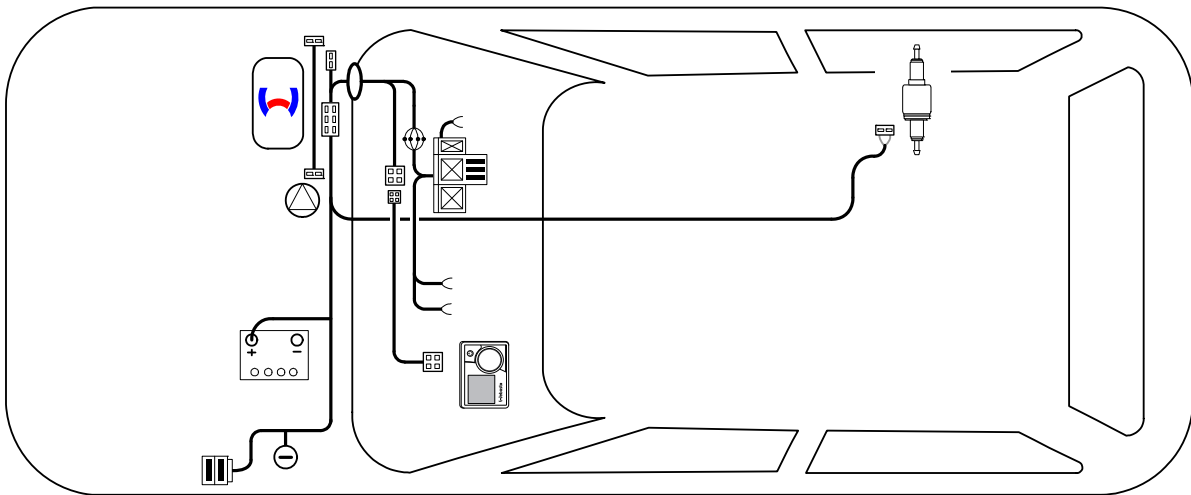
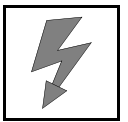
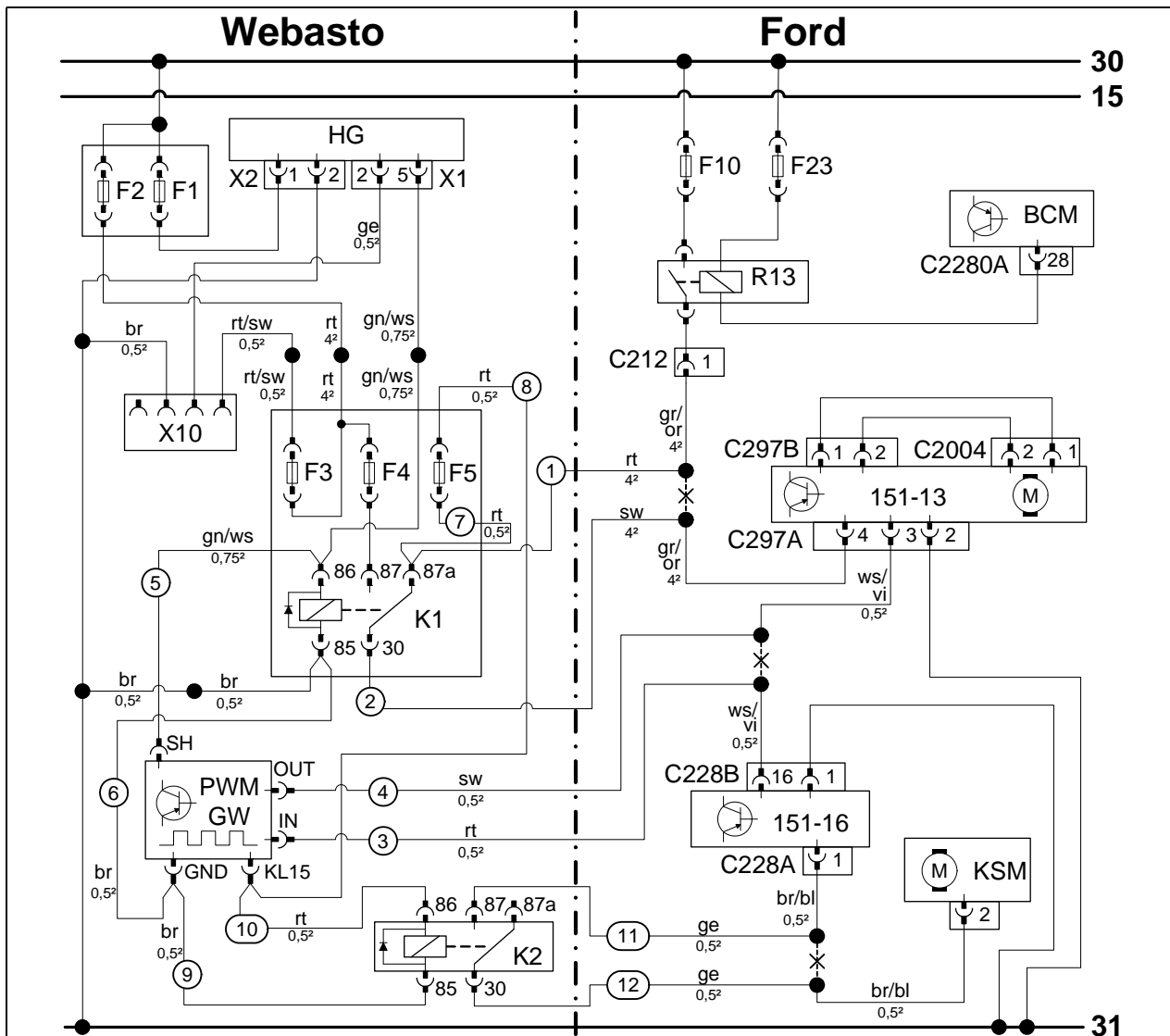


Diagram of wiring harness routing (automatic air-conditioning)



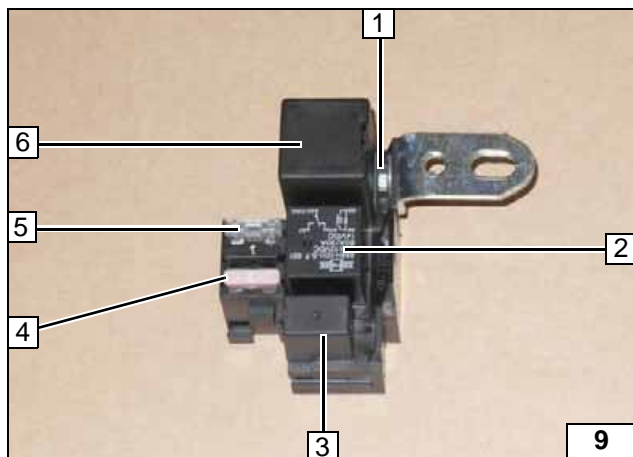
Fan Controller for Automatic Air-Conditioning



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	F10	40A fuse	rt	red
X1	6-pin heater connector	F23	5A fuse	sw	black
X2	2-pin heater connector	BCM	Body control unit	ge	yellow
F1	20A fuse	C2280A	Connector BCM	gn	green
F2	30A fuse	R13	Fan relay	br	brown
X10	4-pin connector of heater control	C212	Socket connection	ws	white
F3	1A fuse	151-13	Fan motor with fan controller	gr	grey
F4	25A fuse	C297B	Connector 151-13	vi	violet
F5	3A fuse	C297A	Connector 151-13	or	orange
K1	Fan relay	C2004	Connector 151-13	bl	blue
PWM GW	Pulse width modulator	151-16	A/C control unit		
K2	Isolating relay	C228B	Connector 151-16		
PWM GW settings:		C228A	Connector 151-16		
Duty cycle: 37%		KSM	Flap positioning motors		
Frequency: 400Hz					
Voltage: not relevant				X	Cutting point
Function: Low-side					Wiring colours may vary.

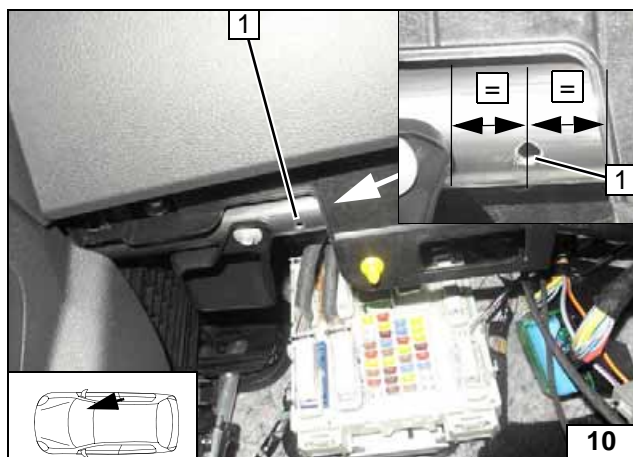
Legend



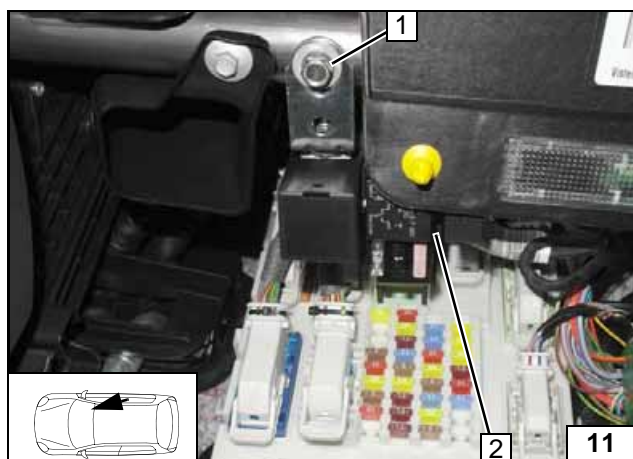
- 1 M5x16 bolt, large diameter washer, socket PWM GW, angle bracket, large diameter washer, nut
- 2 K1 relay
- 3 K2 relay
- 4 3A main fuse F5 of heater control
- 5 25A main fuse F4 of heater control
- 6 PWM GW

Premounting relay and fuse holder of passenger compartment

- 1 5mm dia. hole

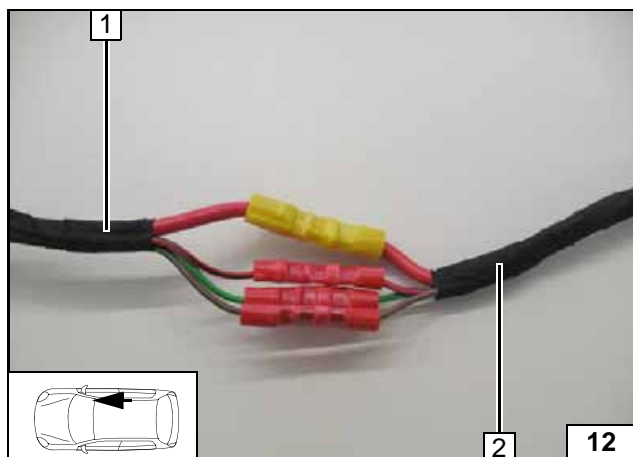


Drilling hole in instrument panel carrier



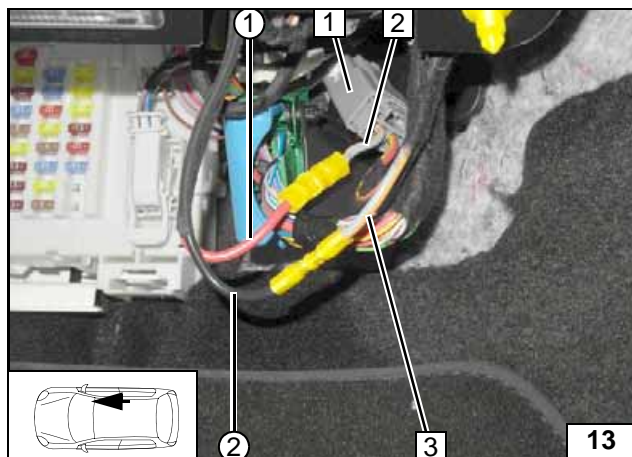
- 1 Self-tapping screw, large diameter washer, angle bracket premounted
- 2 Passenger compartment relay and fuse holder premounted

Installing relay and fuse holder of passenger compartment



- 1 Wiring harness of passenger compartment relay and fuse holder
- 2 Wiring harness of heater

Connecting wiring harnesses using same colour wires



- 1 Connector C212
- 2 Grey/orange (gr/or) wire of connector C212/ pin 1
- 3 Grey/orange (gr/or) wire of connector C297A/ pin 4 fan controller 151-13
- ① Red (rt) wire of K1/87a, fan wiring harness
- ② Black (sw) wire of K1/30, fan wiring harness

**Connect-
ing fan con-
troller**



A/C Control Panel Installation Instructions

Open glove compartment and unclip trim strip 1.



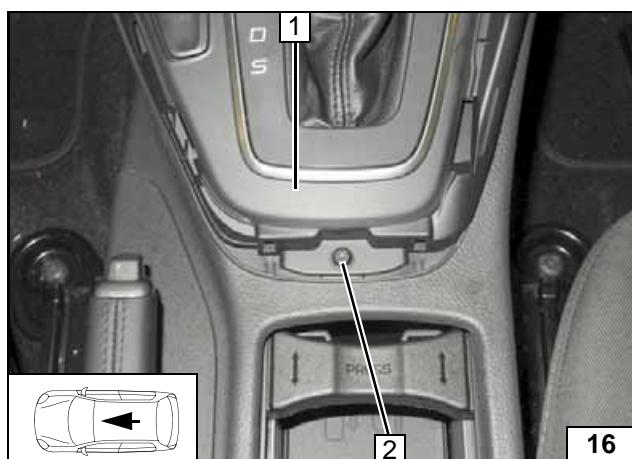
Removing trim strip



- 1 Centre tunnel trim strip
- Fastening points, clipped on or locking tabs

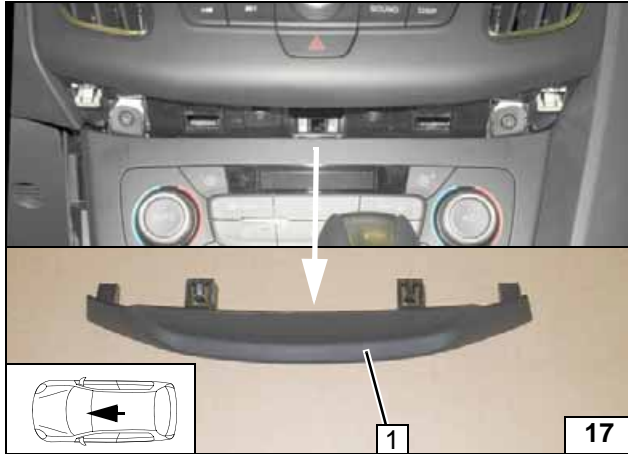


**Removing centre tun-
nel trim strip**



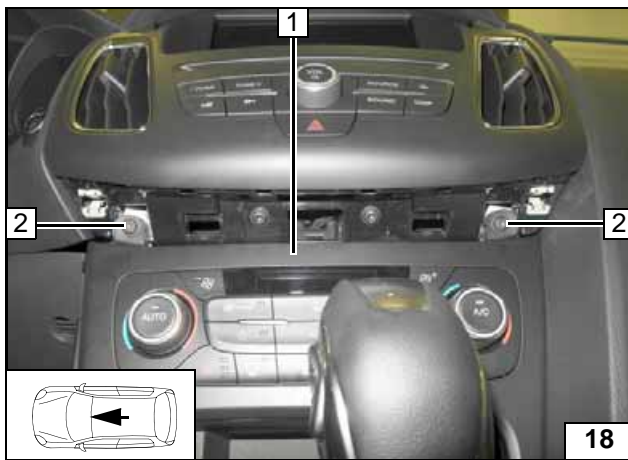
- 1 A/C control panel frame
- 2 Remove original vehicle bolt

Removing bolt



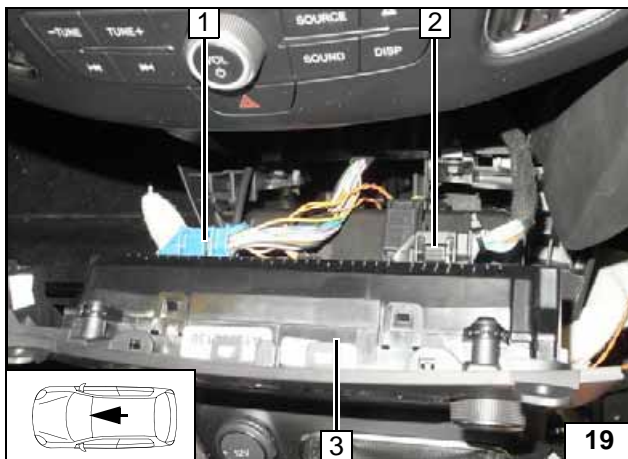
Loosen trim piece **1** carefully in the opposite direction of travel to unlock the centre locking tab with a suitable tool, then unclip.

Removing trim piece



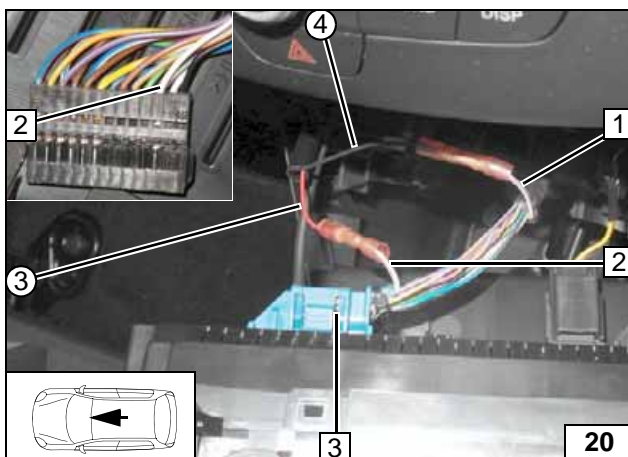
- 1 A/C control panel frame
- 2 Remove original vehicle bolts [2x]

Loosening A/C control panel frame and pulling lightly forward



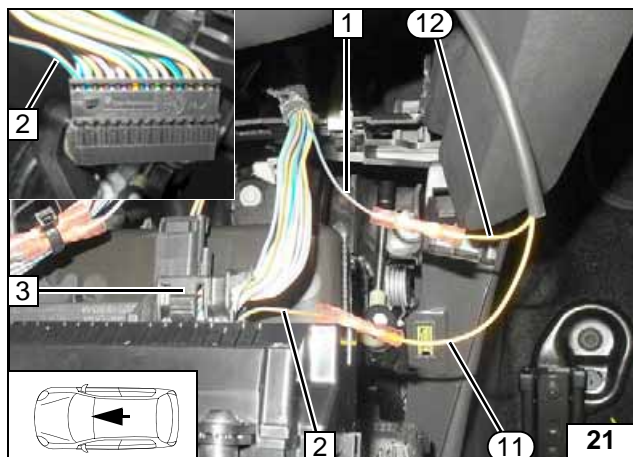
- 1 Connector C228B A/C control unit
- 2 Connector C228A of A/C control unit
- 3 A/C control unit

View of A/C control unit connector



- 1 White/violet (ws/vi) wire from connector C297A/ pin 3 of fan controller 151-13
- 2 White/violet (ws/vi) wire from connector C228B/ pin 16 of A/C control unit
- 3 Connector C228B of A/C control unit
- ③ Red (rt) wire from PWM GW/ IN of PWM control wiring harness
- ④ Black (sw) wire from PWM GW / OUT of PWM control wiring harness

Connecting A/C control unit



- 1 Brown/blue (br/bl) wire of flap positioning motors, pin 2
- 2 Brown/blue (br/bl) wire from connector C228A/ pin 1 of A/C control unit
- 3 Connector C228A of A/C control unit
- ① Yellow (ge) wire of K2/87
- ② Yellow (ge) wire of K2/30

**Connecting
A/C control
unit**

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
<http://dealers.webasto.com>

"Standard" Automatic A/C Operating Instructions

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.

Passenger compartment monitoring , if installed, must be deactivated in addition to the vehicle settings for the heating operation.

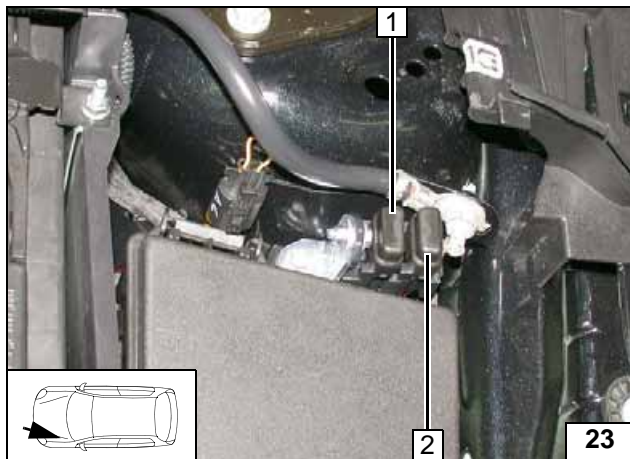
Instructions for deactivation can be taken from the operating instructions manual of the vehicle.

Before parking the vehicle, make the following settings:

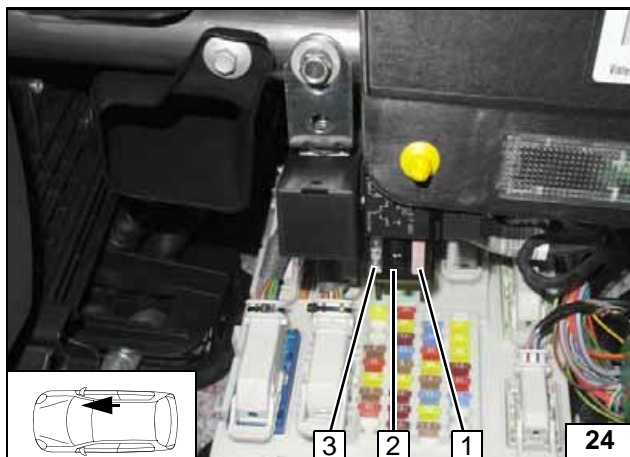


Fan speed need not be pre-set.

- 1 Set temperature to "HI" on both sides
- 2 Air outlet to windscreen



- 1 30A main fuse F2 of passenger compartment
- 2 20A fuse F1 of heater



- 1 3A isolating relay fuse F5
- 2 1A main fuse F3 of heater control
- 3 25A fan fuse F4



A/C control panel

Fuses of engine compartment

Fuses of passenger compartment