Water Heater



Thermo Top Evo5+ Parking Heater 00 0258

Installation documentation

Jeep Grand Cherokee

3.6 V6 Petrol from model year 2011 Left-hand drive vehicle Automatic air-conditioning



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.

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

Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

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.

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

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

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Validity

Manufacturer	Model	Туре	EG BE No. / ABE
Jeep	Grand Cherokee	WK	e4 * 2007 / 46 * 0186 *
	I		
Engine type	Engine model	Output in kW	Displacement in cm ³
ERB	Petrol V6	210	3604

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

The installation location of the digital timer must be coordinated with the end customer before the installation.

Heater/Installation Kit

Quantity	Description	Order No.:
1	Basic delivery scope for the Thermo Top Evo+	See Price list
1	Installation kit for Jeep Grand Cherokee 2011 3.6 V6 Petrol	1317820A
1	Heater control	See Price list

Foreword

This installation documentation applies to the Jeep Grand Cherokee 3.6 V6 Petrol vehicles - for validity, see page 2 - from model year 2011 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.

In any case, however, it is necessary to observe the specifications in this "installation documentation", the "operating instructions" and the "installation instructions" for the *Thermo Top Evo*. The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

General Instructions

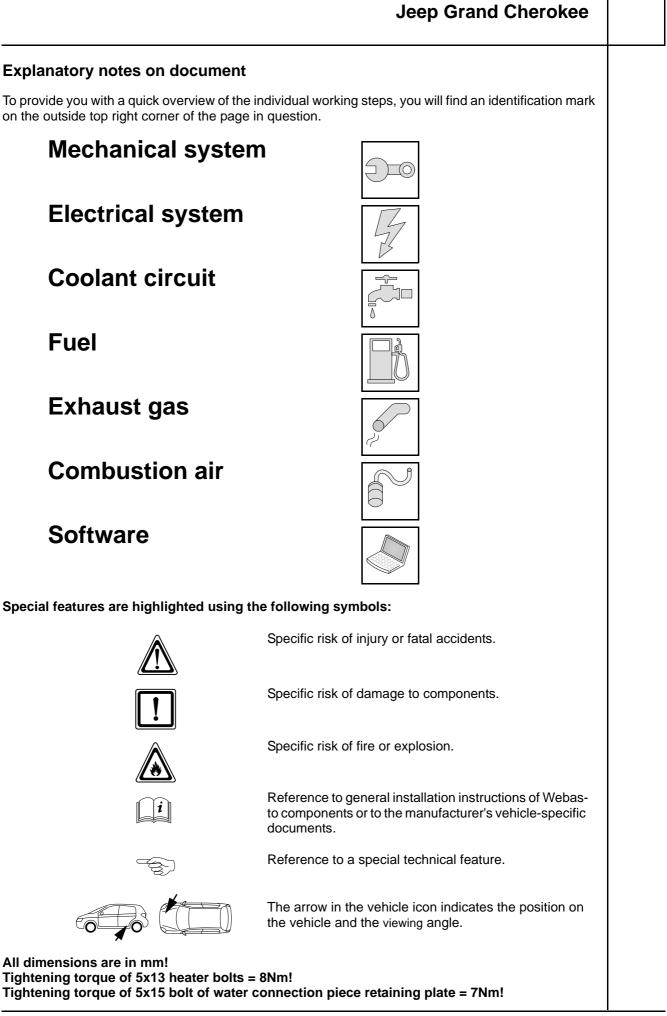
Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate and tie back loose wires.

Sharp edges should be fitted with rub protection (split-open fuel hose).

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329). When installing an IPCU, the corresponding settings must be checked or adjusted before the installation.

Special Tools

- Torque wrench for 2.0 30 Nm
- Torque wrench for 30 80 Nm
- Hose clamping pliers
- Metric thread-setter kit

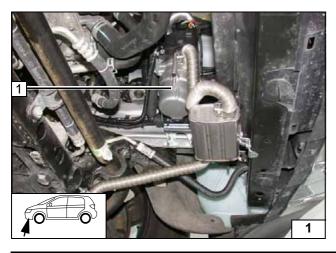


Preliminary work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Disconnect the battery "earth" connection.
- Depressurise 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.
- Remove the exhaust system (middle and rear silencer)
- Remove the heat protection trim of the cardan shaft
- Remove the cardan shaft according to the manufacturer's instructions.
- Remove the fuel lines trim at the left on the underbody.
- Remove the fuel tank according to the manufacturer's instructions.
- Remove the fuel-tank sending unit according to the manufacturer's instructions.
- Remove the lower engine cover.
- Drain the engine coolant.
- Remove the engine design cover.
- Remove the air filter box including the air ducting
- Remove the footwell trim under the glove compartment.
- Remove the air outlet nozzle in the right footwell.
- Remove the trim of the entrance strip on the right side (for Telestart option only).
- Remove the lower A-pillar trim in the right footwell.
- Remove the A/C control panel.

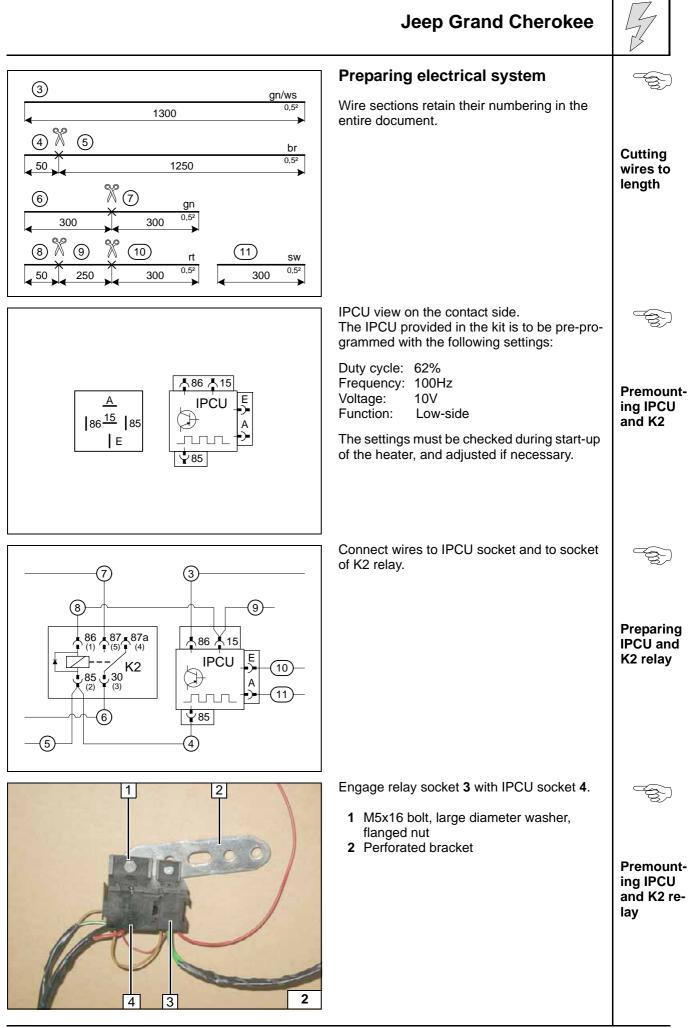
Remove page 32 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



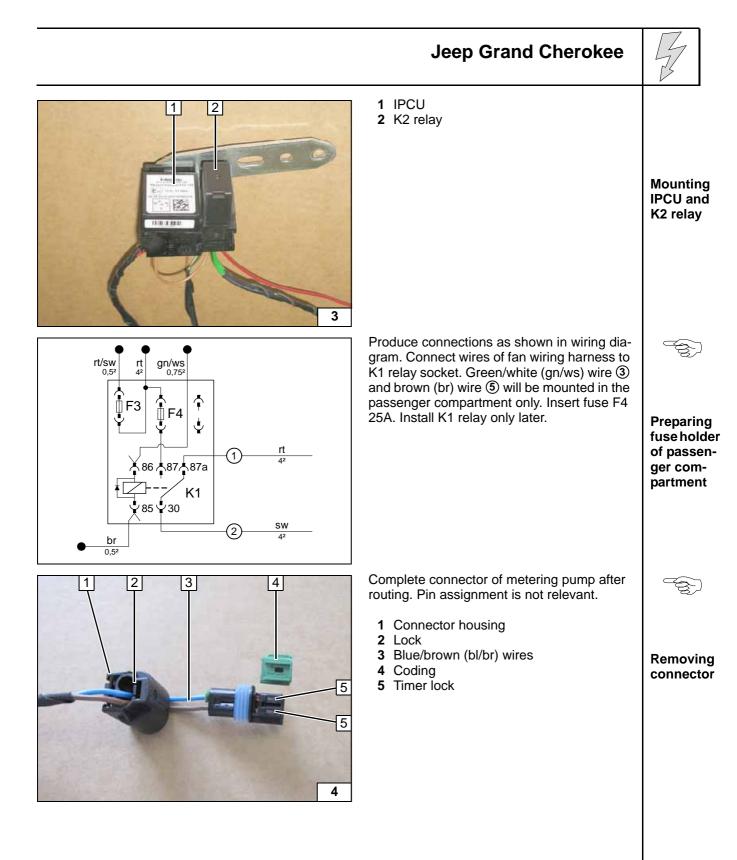
Heater installation location

1 Heater

Installation location



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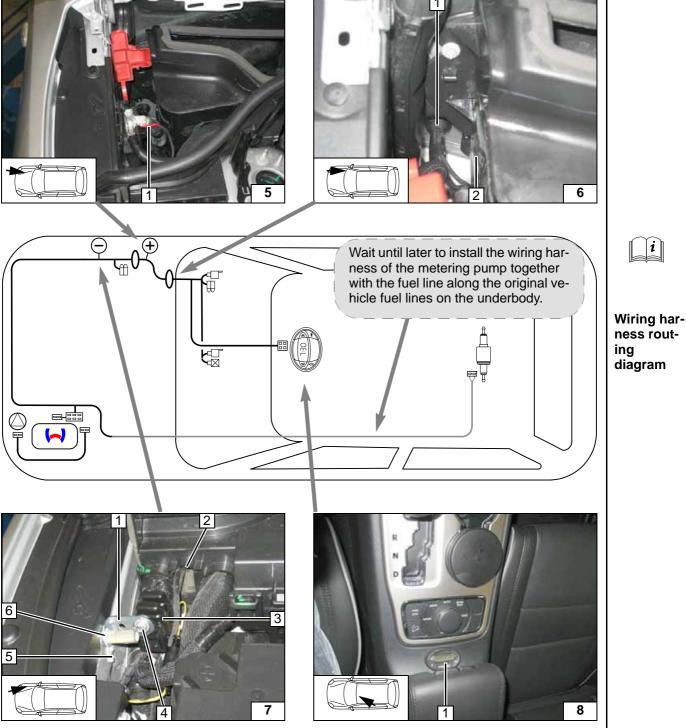
Electrical system

Positive wire

1 Positive wire on original vehicle positive support point

Wiring harness pass through

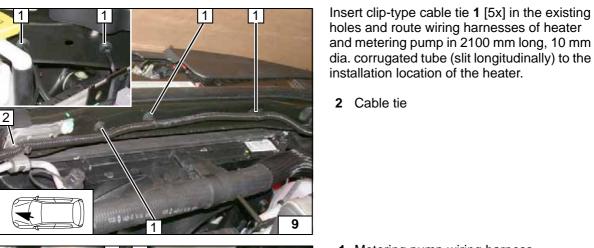
1 Cable grommet

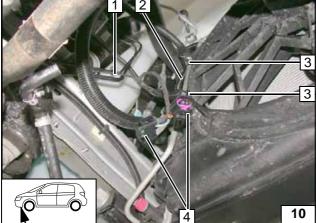


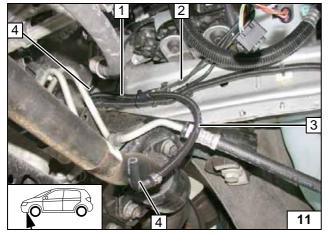
Fuse holder of engine compartment, earth wire

- 1 Angle bracket
- 2 Cable pass through via partition wall
- 3 F1-2 fuses
- 4 M5x16 bolt, washer [2x], retaining plate for fuse holder, nut
- 5 Earth wire with 8 mm dia. cable lug
- 6 Original vehicle earth support point

- **Digital timer**
 - 1 Digital timer







Route wiring harness of metering pump and 6000 mm long fuel line together in 10 mm dia. corrugated tube **1** behind the heat protection trim **4** along the brake wires to the underbody.

2 Metering pump wiring harness

Metering pump wiring harness
 Wiring harness of heater

4 Connector of heater wiring harness

3 Cable tie [2x]

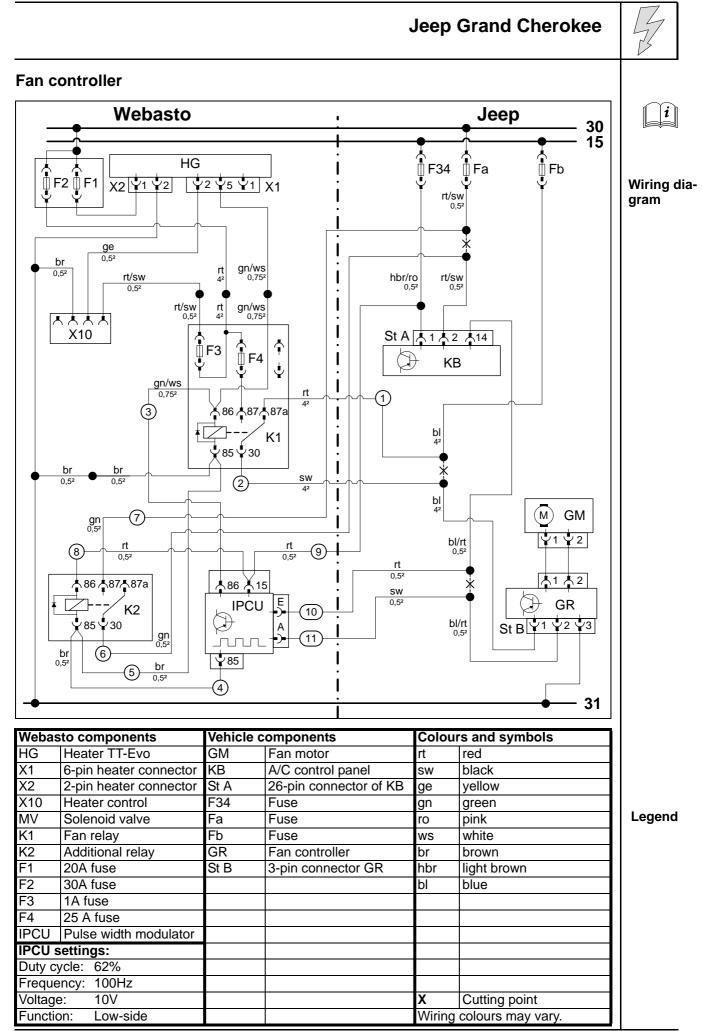
- 3 10 mm dia. corrugated tube, fuel line
- 4 90° moulded hose

Routing in engine compartment

Wire rout-

ing in engine compartment

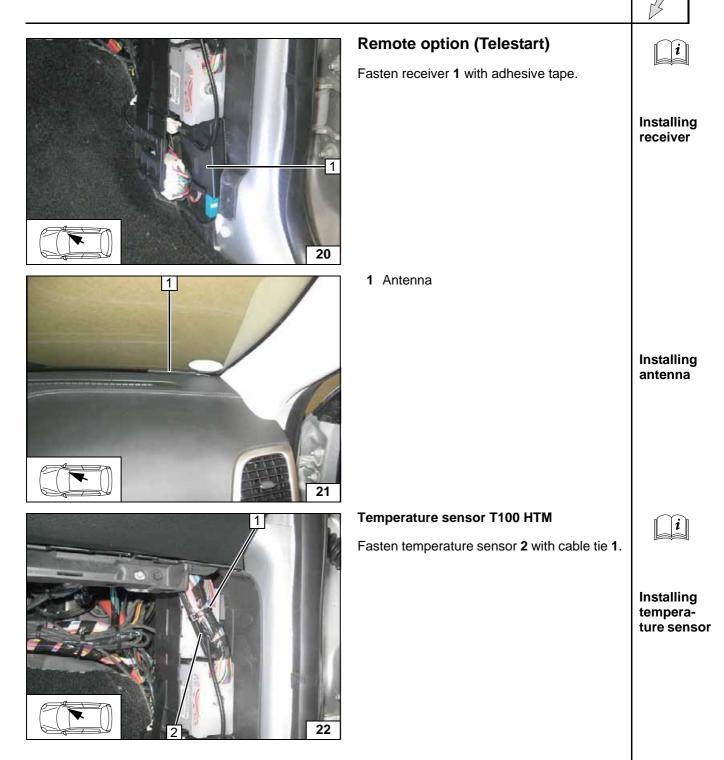
Wire routing in engine compartment

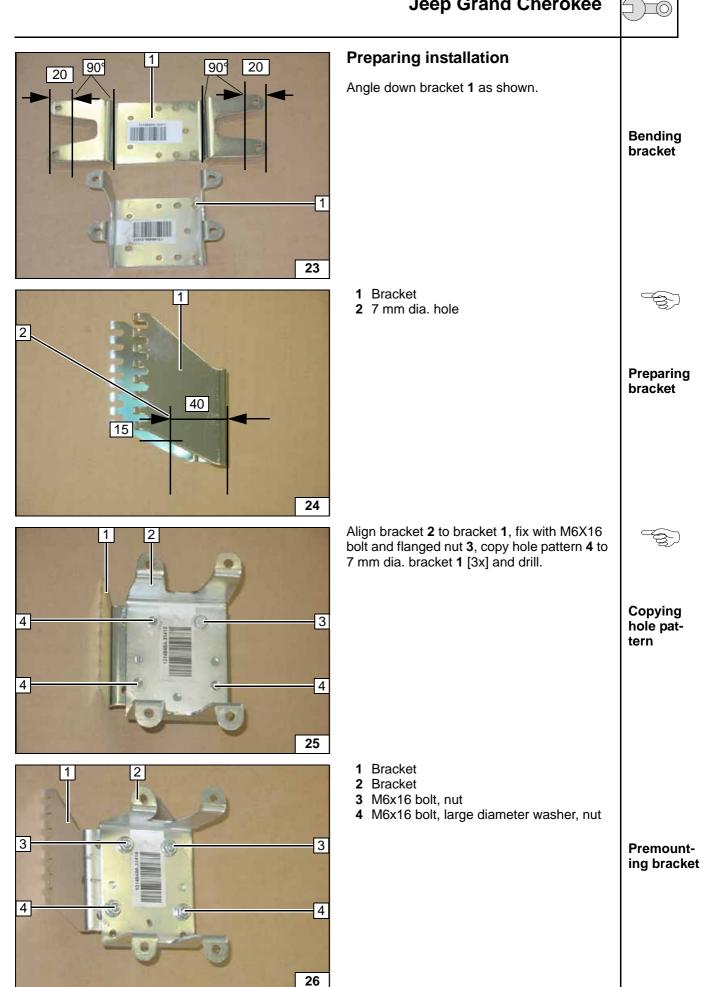


Jeep Grand Cherokee	7
 Perforated bracket Original vehicle bolt 	Premount- ing K2 re- lay and IPCU
Connection to 26-pin connector 2 from A/C control panel. Produce connections as shown in wiring diagram. 1 Blue/red (bl/rt) wire of A/C control panel connector Pin 14 3 Blue/red (bl/rt) wire of fan controller (10) Red (rt) wire from IPCU/E (11) Black (sw) wire from IPCU/A	Connect- ing A/C control panel IPCU
 Connection to 26-pin connector 2 from A/C control panel. Produce connections as shown in wiring diagram. 1 Red/black (rt/sw) wire from Fuse Fa 3 Red/black (rt/sw) wire of A/C control panel connector Pin 2 (6) Green (gn) wire of K2/3 (7) Green (gn) wire of K2/5 	Connect- ing K2 re- lay of A/C control panel
 Connection to 26-pin connector 2 from A/C control panel. Make connections according to wiring diagram. Route green/white (gn/ws) wire ③ of IPCU/86 and brown (br) wire ⑤ of K2/1 relay from centre console in the front passenger side footwell. 1 Light brown/pink (hbr/ro) wire from fuse F34 3 Light brown/pink (hbr/ro) wire of A/C control panel connector Pin 1 ④ Red (rt) wire from IPCU/15 	Connect- ing IPCU/15

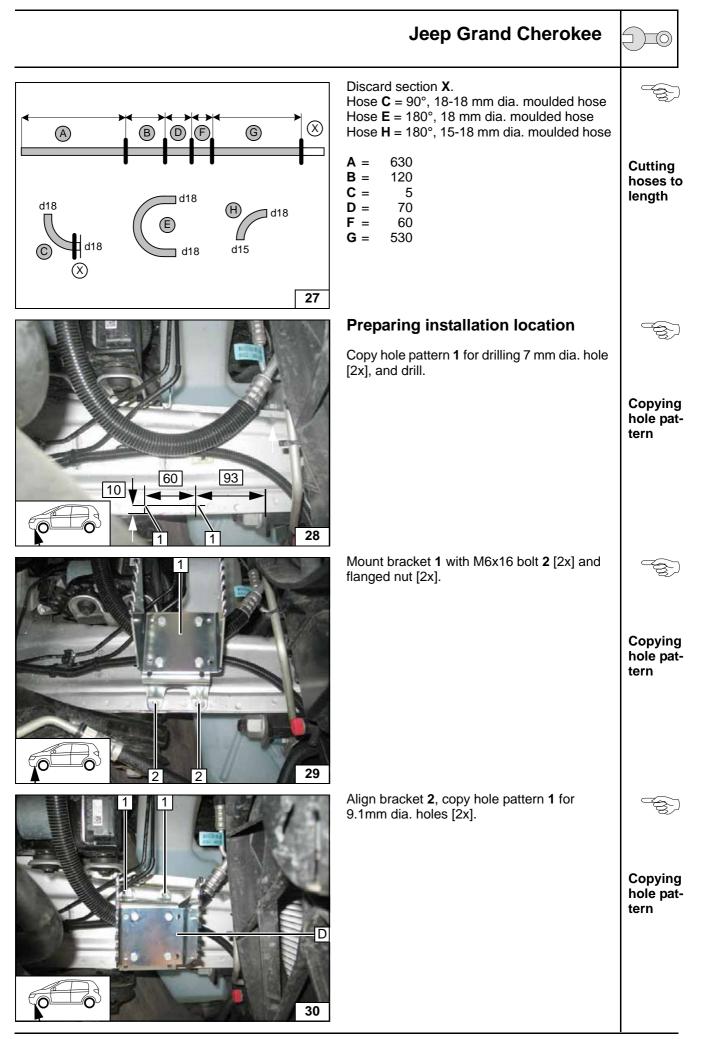
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Jeep Grand Cherokee	7
Connect same colour wires of wiring harness of passenger compartment fuse holder 3 with wiring harness of heater 4 as shown in wiring diagram.	
 Insert red (rt) wire ① in K1 relay terminal 87a Insert black (sw) wire ② in K1 relay terminal 87a 	Connect- ing wiring harnesses
Make connections according to wiring diagram. Connect green/white (gn/ws) wire ③ to termi- nal 86 and brown (br) wire ⑤ to terminal 85 of IPCU socket. Install K1 relay only later.	
 M5x16 bolt, large diameter washer, flanged nut Angle bracket Fuse holder of passenger compartment Geen/white (gn/ws) wire of IPCU/86 Brown (br) wire from IPCU/85 	Preparing fuse holder of passen- ger com- partment
Connection to 3-pin connector 3 from fan controller. Produce connections as shown in wiring diagram.	
 Blue (bl) wire of fuse Blue (bl) wire of fan controller connector Pin 1 Red (rt) wire from K1/87a Black (sw) wire from K1/30 	Connect- ing fan controller
Mount K1 relay 2 after installation. 1 Angle bracket	
3 M6x20 bolt, large diameter washer, flanged nut, original vehicle hole	Installing fuse holder





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1 9.1 mm dia. hole, M6 rivet nut [2x] 31 **Preparing heater** 1 **1** 90° water connection piece, sealing ring [2x each] 2 5x15 self-tapping bolt, retaining plate of water connection piece

i Installing water connection piece

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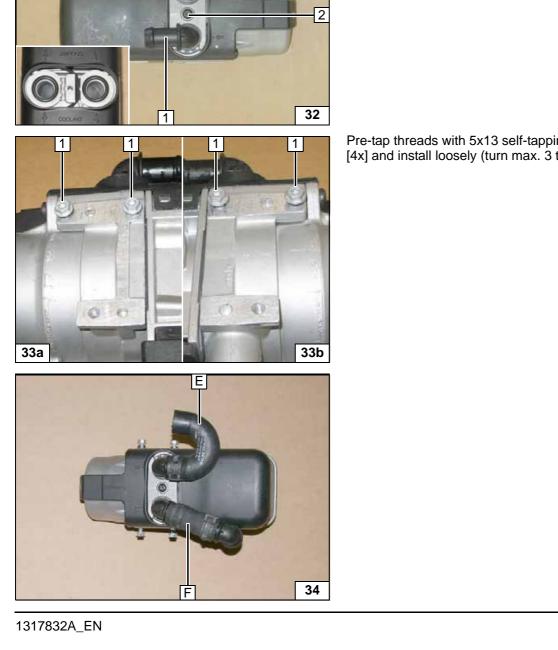
Installing rivet nuts

Pre-tap threads with 5x13 self-tapping bolt 1 [4x] and install loosely (turn max. 3 threads).

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Mounting hoses E and F



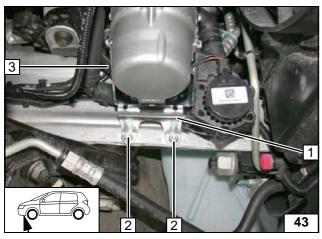
Jeep Grand Cherokee	
 Circulating pump Mounting for circulating pump 	Premount ing circu- lating pump
 Heater bracket Circulating pump premounted M6x25 bolt, washer, flanged nut 	Premount ing bracke and circu- lating pump
 Separate retaining clip 2 from hose bracket 1. 1 Hose bracket 3 Perforated bracket, 38 mm dia. rubber-coated clamp, M6x16 bolt, flanged nut 	Premount ing coolan hoses A, C and H
 Silencer Intake pipe Angle bracket, M5x16 bolt, nut, large diameter washer, 51 mm dia. clamp 	Premount ing silence er

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	Jeep Grand Cherokee	
1	Insert heater 2 in bracket 1 as shown and tighten 5x13 self-tapping bolt 3 [2x].	
		Premount- ing heater
	 Connect hose D and E. 1 Attach wiring harness of circulating pump 2 Tighten 5x13 self-tapping bolts [2x] 	Premount- ing heater
	1 Intake pipe	
	2 25 mm dia. spring clip	Premount- ing intake pipe on heater
	1 5x13 self-tapping bolt, perforated bracket	Connect- ing prein- stalled coolant hoses to heater

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Installing heater

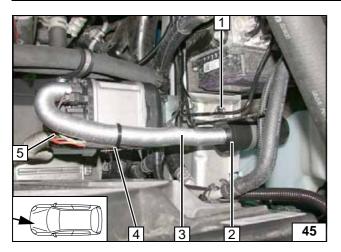
Align A/C line **3** within the bracket without system.

Bracket with heater premounted
 M6x16 bolt, flanged nut

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Align brake wires 3 without system.

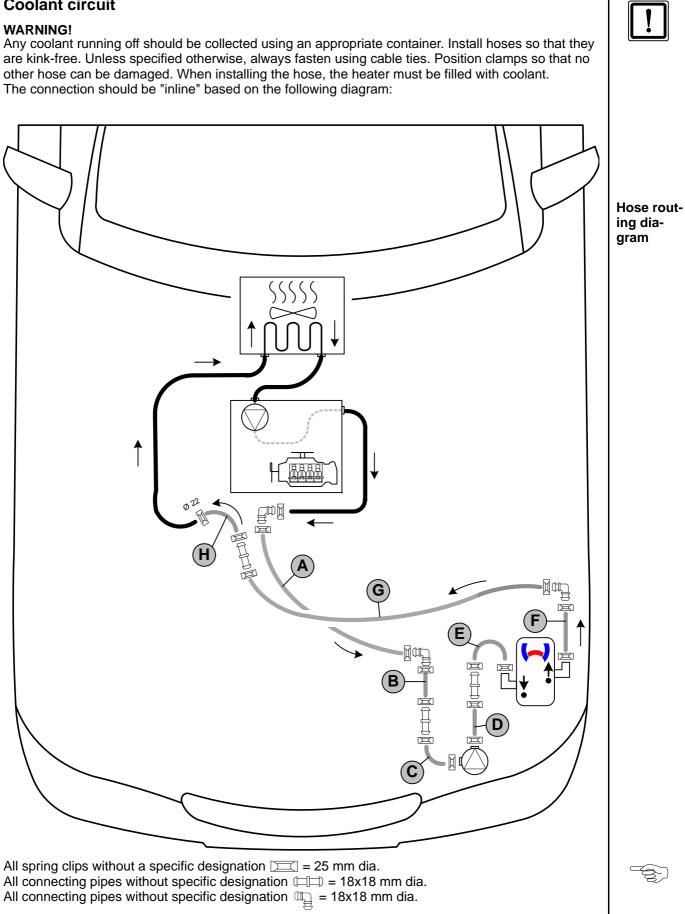
- M6x20 bolt, spring lockwasher
 Bracket with heater premounted



Combustion air

Align silencer **2** and install with plastic nut **1** on original vehicle stud bolt.

- 3 Intake pipe
 4 Cable tie, wiring harness of heater
 5 Attach connector [2x] of heater wiring harness to heater



Coolant circuit



Jeep Grand Cherokee	
Pull hose end at engine outlet 1 off pipe 3 , the original vehicle spring clip 2 will not be re-used.	Cutting point
Route hoses A and G to connecting point.	Routing in engine compart- ment
 Ensure sufficient distance to neighbouring components. Align hose bracket 2. 1 Pipe on heat exchanger inlet 3 Hose section of engine outlet 	Connect- ing engine outlet and heat ex- changer in- let
Ensure sufficient distance to neighbouring components. 1 38 mm dia. rubber-coated pipe clamp	Routing in engine compart- ment

1 90° moulded hose, fuel line

2 10 mm dia. clamp

Fuel

CAUTION!

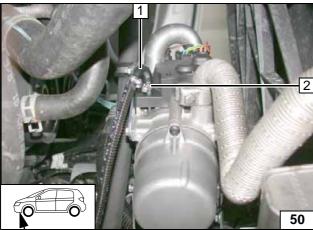
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off with an appropriate container.

Route 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.

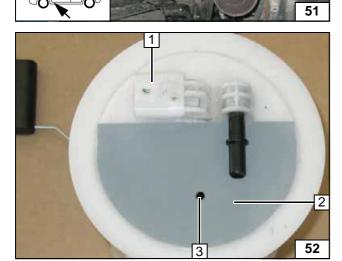
WARNING!

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



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 Route fuel line and wiring harness of metering pump in corrugated tube 1 on original vehicle lines to the rear.



Remove the tank according to the manufacturer's instructions. Remove fuel-tank sending unit **1** in accordance with manufacturer's instructions. Cut out template of fuel-tank sending unit **2** and apply.

3 Copy hole pattern, 6 mm dia. hole



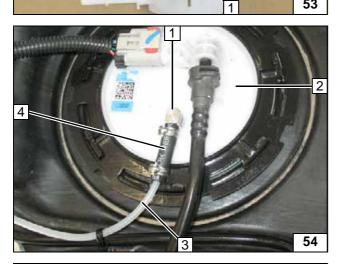




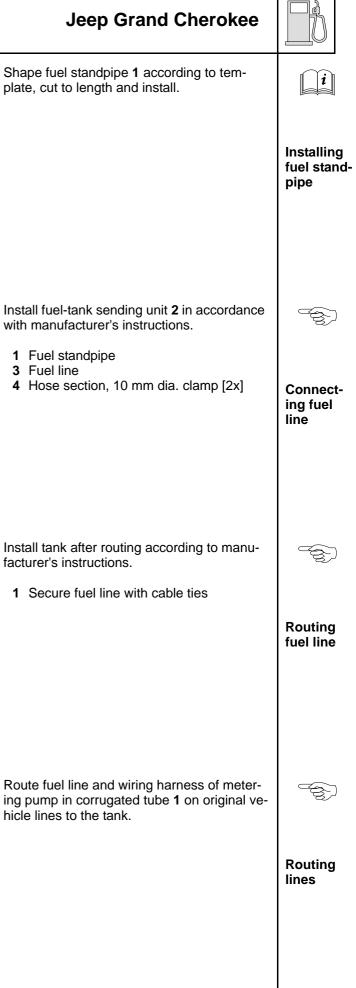
Routing lines



Fuel extraction



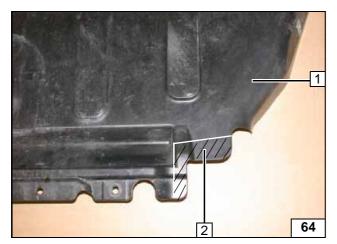




Jeep Grand Cherokee Route fuel line and wiring harness of metering pump in corrugated tube 1 to the installation location of the metering pump. Routing lines 57 1 Perforated bracket 1 Preparing perforated 57 bracket 55 1 Perforated bracket 1 2 Cable tie 3 Hose section, 10 mm dia. clamp [2x each] 4 Metering pump mounting 5 Metering pump Premount-2 6 6 M6x25 bolt, flanged nut ing metering pump 58 3 3 Check the position of the components; adjust 1 3 *i*) if necessary. Check that they have freedom of movement. 1 Fuel line of heater 2 Wiring harness of metering pump, con-Installing nector mounted metering **3** 10 mm dia. clamp [2x] pump 4 Fuel line of fuel standpipe 5 Perforated bracket 5 6 Original vehicle bolt 59 6 3

	Jeep Grand Cherokee	
	<pre>Exhaust gas Discard section X. 1 Exhaust pipe a = 390 2 Exhaust end section b = 350</pre>	Preparing exhaust pipe
$ \begin{array}{c} $	Angle down perforated bracket 1 as shown.	Preparing perforated bracket
	 Exhaust silencer Perforated bracket, M6x16 bolt, spring lockwasher 	Premount- ing ex- haust silencer
	1 Perforated bracket	Preparing perforated bracket for exhaust outlet

Jeep Grand Cherokee	
 Original vehicle hole 9.1 mm dia. hole for M6 rivet nut 	Hole for ex- haust si- lencer
 Exhaust silencer M6x20 bolt, spring lockwasher, M6 rivet nut 	Mounting exhaust si- lencer
 Hose clamp [3x] Exhaust pipe Exhaust silencer Exhaust-pipe end section 	Mounting exhaust si- lencer
 Ensure sufficient distance to neighbouring components. 1 M6x20 bolt, flanged nut 2 Exhaust end section 3 Pipe-clamp 4 Perforated bracket 5 M6x20 bolt, large diameter washer, flanged nut, existing hole 	Installing exhaust end sec- tion



Process underride protection **1** as shown.

2 Discard section

Processing underride protection

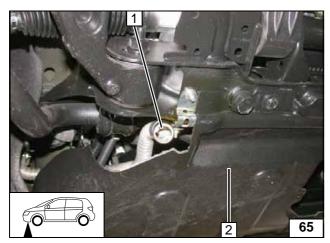
Final Work

WARNING!

Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate all loose lines and tie back.

Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect the battery
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- Set digital timer, teach telestart transmitter
- Make settings on A/C control panel according to the "Operating Instructions for End Customer".
- Place signboard "Switch off parking heater before refilling" in the area of the filler neck
- For initial startup and function check, please see Installation Instructions



Ensure sufficient distance to neighbouring components.

- 1 Exhaust end section
- 2 Mount underride protection

Aligning exhaust end section

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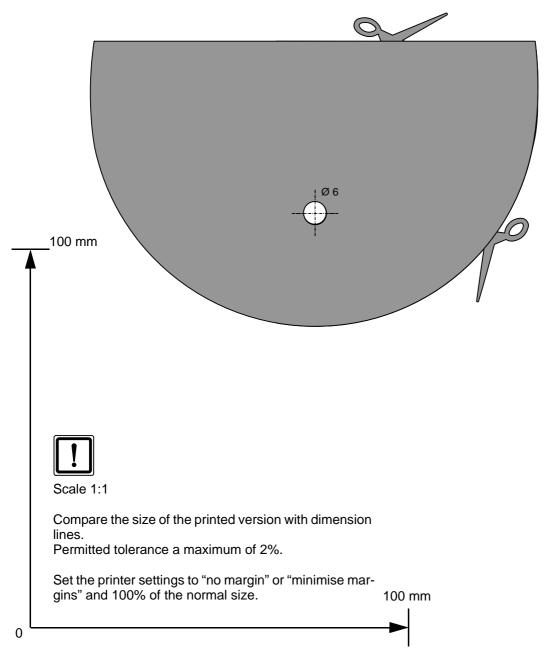


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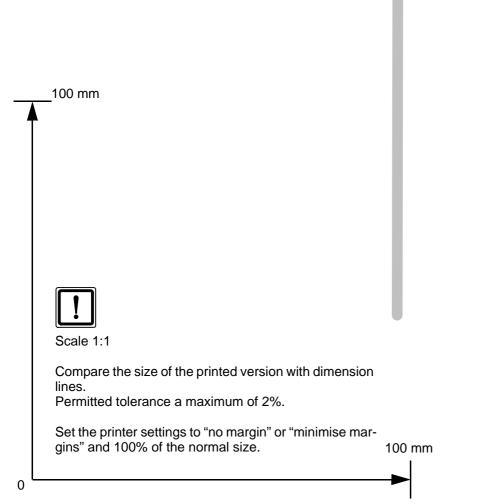
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Template for fuel-tank sending unit



Template for Petrol Fuel Standpipe



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 vehicle has passenger compartment monitoring, this must be deactivated in addition to the vehicle settings for the heating operation.

Instructions for deactivation are given in the Operating Manual of the vehicle!

Before parking the vehicle, make the following settings:



The fan speed need not be pre-selected.

- 1 Set temperature to "HI"
- 2 Air outlet to windscreen



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Automatic air-conditioning