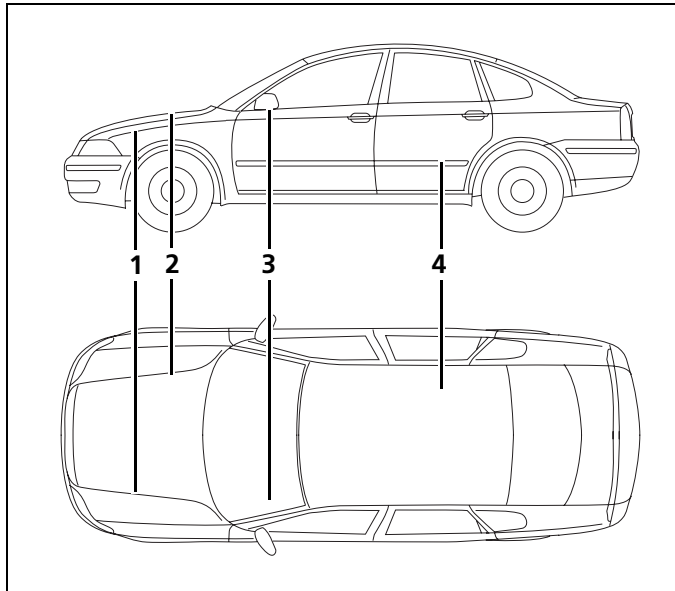


Thermo Top



VW Passat

Beginning Model Year: 2005

Special instructions for these models

Part locations may differ slightly dependent on the vehicle model.

Legend

- 1 BlueHeat Coolant Heater, Exhaust Tube, and Combustion Air Intake Silencer
- 2 Fuse Holder, Relays and Resistor Assembly
- 3 Timer Control
- 4 Fuel Pump

Special Tools

- Hose Clamping pliers
- Torque Wrench

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- Improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide leading to serious injury or death.
- Installation and repair of Webasto heating and cooling systems requires special Webasto training, technical information, special tools and special equipment.
- NEVER attempt to install or repair a Webasto heating or cooling system unless you have successfully completed the factory training course and have the technical skills, technical information, tools and equipment required to properly complete the necessary procedures.
- ALWAYS carefully follow Webasto installation and repair instructions and heed all WARNINGS.
- Webasto rejects any liability for problems and damage caused by the system being installed by untrained personnel.

VW Passat

Parts List

Quantity	Part	Part Number
1	Heater Kit	5000515C
1	Installation Kit	5001062B

Vehicle Information

Manufacturer	Model	Year	Engine Type
Volkswagen	Passat	Beginning 2005	2.0L TDI

Foreword

This installation requires special expertise from a Webasto training course to install a Webasto Thermo Top heater, which means that it may only be installed by a specially trained workshop or dealership. Webasto cannot accept any liability for faults and damage caused by the system being installed by untrained personnel.

Scope and Purpose

These non-binding installation instructions are intended to support authorized Webasto trained distributors, dealers and personnel in the installation of the Thermo Top BlueHeat Coolant Heaters.

These non-binding installation instructions apply to the vehicles listed on the front cover of this installation document unless technical modifications on the vehicle influence the installation, excluding all liability claims. Depending on the version and equipment in the vehicle, changes may be required to the installation work set out in these installation instructions. In any event, however, the directives in the "installation manual" and "operating manual" must be followed. Acknowledged engineering conventions must be observed for the installation work.

ATTENTION

All relevant state and provincial licensing regulations if any, governing the installation and use of auxiliary heating devices must be observed!



CAUTION

Location of heater, installation of coolant lines, fuel system and components, wiring and control devices are important for proper operation. Failure to comply with the installation instructions provided may result in poor operation or damage to heater and vehicle components.



Symbol Identification

Symbols that define sections in manual



Mechanical Preparation



Fuel



Electrical



Exhaust



Coolant



Combustion Air Intake

General Symbol Descriptions



Warning



Refer to Webasto or Manufacturer Manual



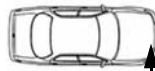
Caution



Attention



Flammable or Combustible



Line of Sight/Item Location on Vehicle

General References

- Bare body parts, for example around drilled holes, must be treated with anti-corrosive coating.
- Secure hoses, cables and wiring harnesses with cable ties and fit protective hoses around them at chafing points.
- Fit edge protectors (opened fuel hose) to sharp edges.

Preparation

Heater Kit

- Verify and identify all contents of kit.

Vehicle

- Verify fuel content in tank.
- Remove underbody splash shields.
- Remove bulkhead cowl panel.
- Remove windshield wiper arms.
- Remove fuel tank splashshield.
- Remove engine cover.
- Remove air intake tube.

CAUTION

For reasons of safety due to possible fuel spillage, it is recommended that there be no more than 1/2 tank of fuel present. If fuel quantity is greater than 1/2 of capacity, make provisions to reduce quantity of fuel.

- Disconnect negative terminal of vehicle battery(s).
- Protect vehicle fenders, panels and interior with covers



Heater Installation Site

ATTENTION

The Webasto Auxiliary Coolant Heater is installed on the left side of the engine next to the vehicle ABS unit.

- (1) Webasto Auxiliary Coolant Heater (Installed)





Electrical - Overview



ATTENTION

The routing of cables and wires are done in accordance to the general valid rules of engineering. If not described differently, securing of wiring and cables is done with cable ties to the vehicle's own wires and cable harnesses.

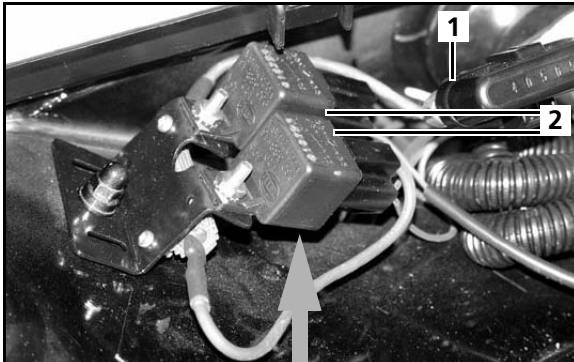


ATTENTION

Timer control location is a recommendation only. Please consult with the customer before mounting.

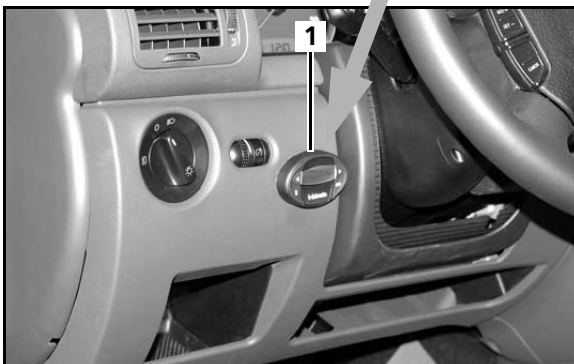
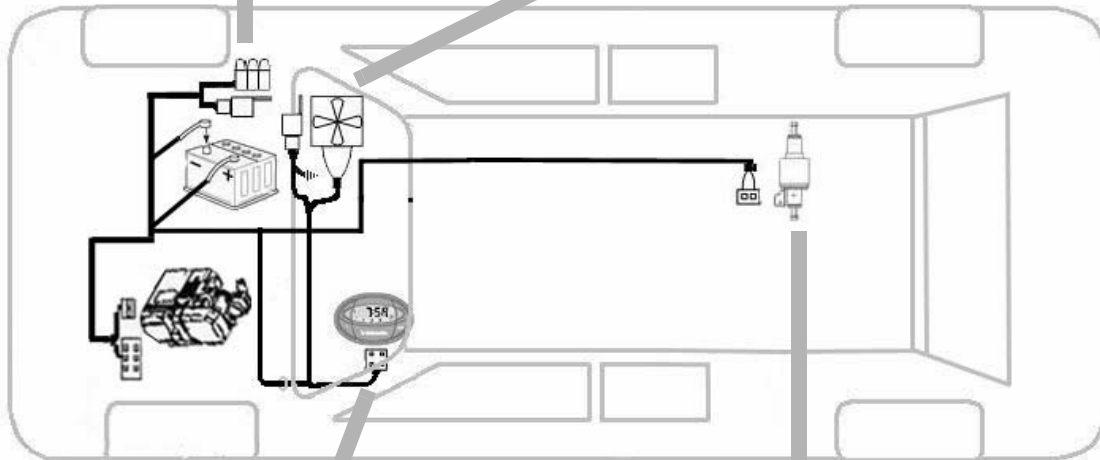
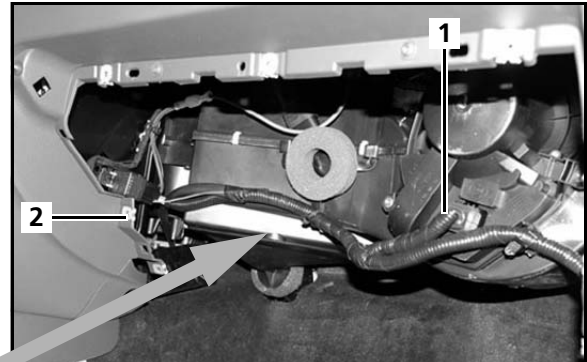
Fuse Block/Relays/Resistor

- (1) Fuse Holder
- (2) Relays



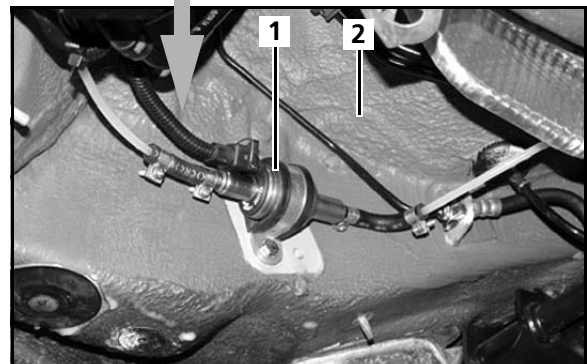
HVAC Blower Motor

- (1) Blower Control Integration
- (2) Glove Box Area



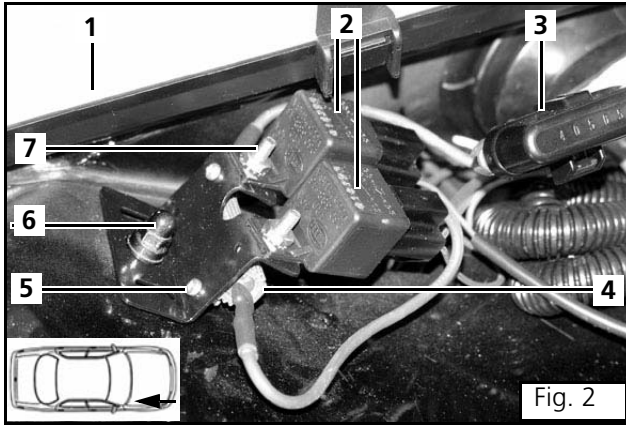
Digital Timer (Sample Location)

- (1) Webasto Digital Timer



Fuel Metering Pump

- (1) Fuel Metering Pump
- (2) Right Rear Side of Vehicle



Electrical Harness

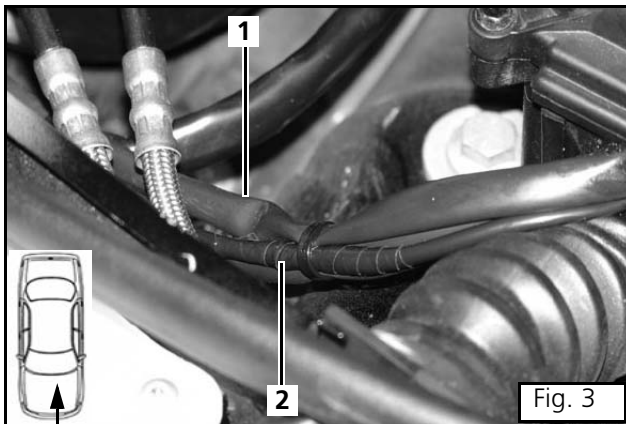
ATTENTION

Cut wire tie holding negative-side blower harness (with relay K3) from main harness and set aside.

Bend electrical mounting bracket as shown in Figure 2.

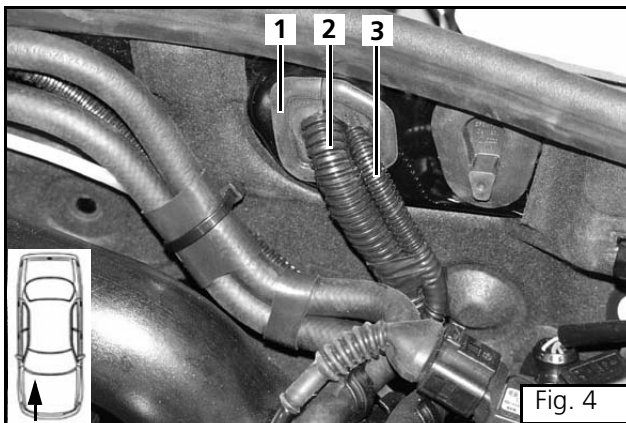
Mount heater electrical components to bracket and secure bracket to vehicle with existing nut.

- (1) HVAC air filter
- (2) Relays K1 and K2
- (3) Fuse holder
- (4) Resistor
- (5) Screw M3x10, Nut M3 (2ea.)
- (6) Existing vehicle nut
- (7) Pan head screw 10-32x5/8", Nut 10-32 (2ea.)



Extend blue ignition fuse tap wire, using some wire from the fuel pump harness, to reach the interior fuse/relay center. Cover with loom.

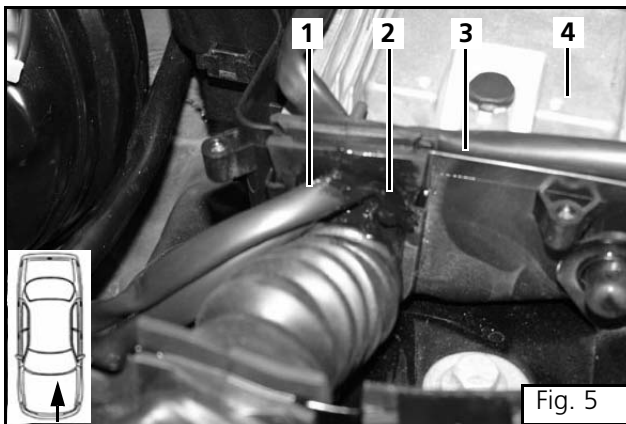
- (1) Timer and blower control harnesses
- (2) Fuse tap wire



Routing Harnesses Through Bulkhead

Route heater control and fuel pump harnesses through empty bulkhead grommet.

- (1) Bulkhead grommet
- (2) Heater control harness
- (3) Fuel pump harness



ATTENTION

Apply sealant to area where blower and timer control harnesses pass through ECM compartment.

Route blower control harness, timer harness, and fuse tap wire extension through ECM compartment and into the interior of the vehicle through hole in bulkhead.

- (1) Timer, blower, and fuse tap extension wires
- (2) Sealant applied
- (3) ECM compartment (cover removed)
- (4) ECM





Timer Installation



CAUTION

Check behind panels for obstructions before drilling holes.



ATTENTION

Before installing the timer, please confirm the installation location with the customer.

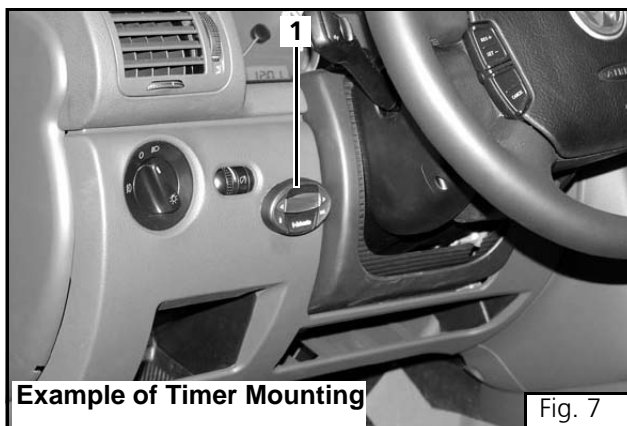
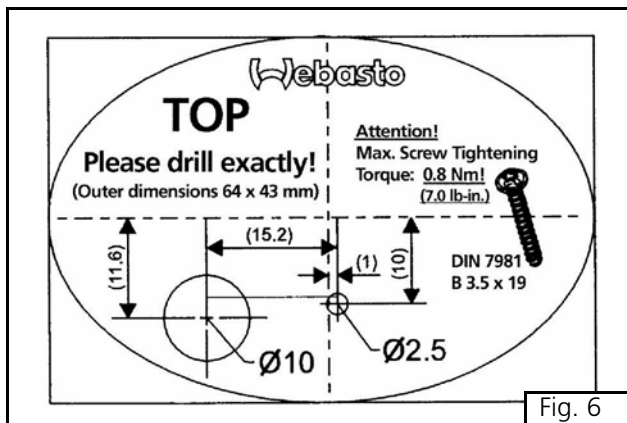
Affix supplied template to panel. Drill 10 mm (25/64 in.) and 2.5 mm (3/32 in.) holes where indicated on template. Figure 6 shows a translated sample of the template supplied.



ATTENTION

Before installing the timer, please confirm the installation location with the customer.

- (1) Timer

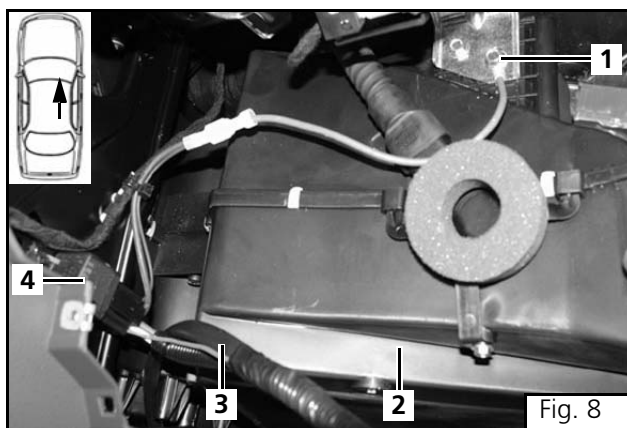


Integration into the blower System

Route positive-side blower harness over to blower motor area.

Mount negative-side blower harness and relay in vicinity of HVAC blower.

- (1) Chassis ground
- (2) Vehicle blower motor area (passenger interior)
- (3) Positive-side blower harness
- (4) Relay K-3 of negative-side harness



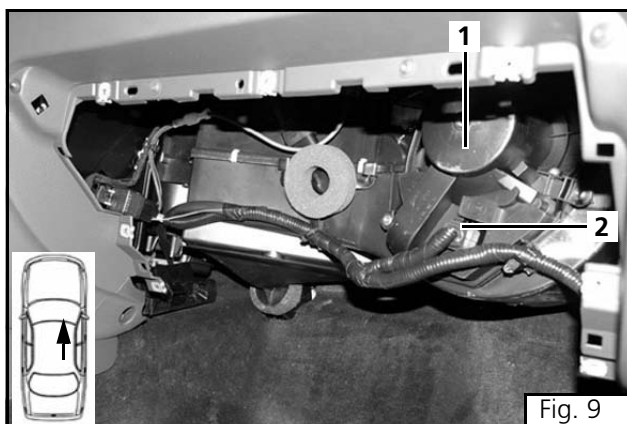
HVAC Blower Motor Location

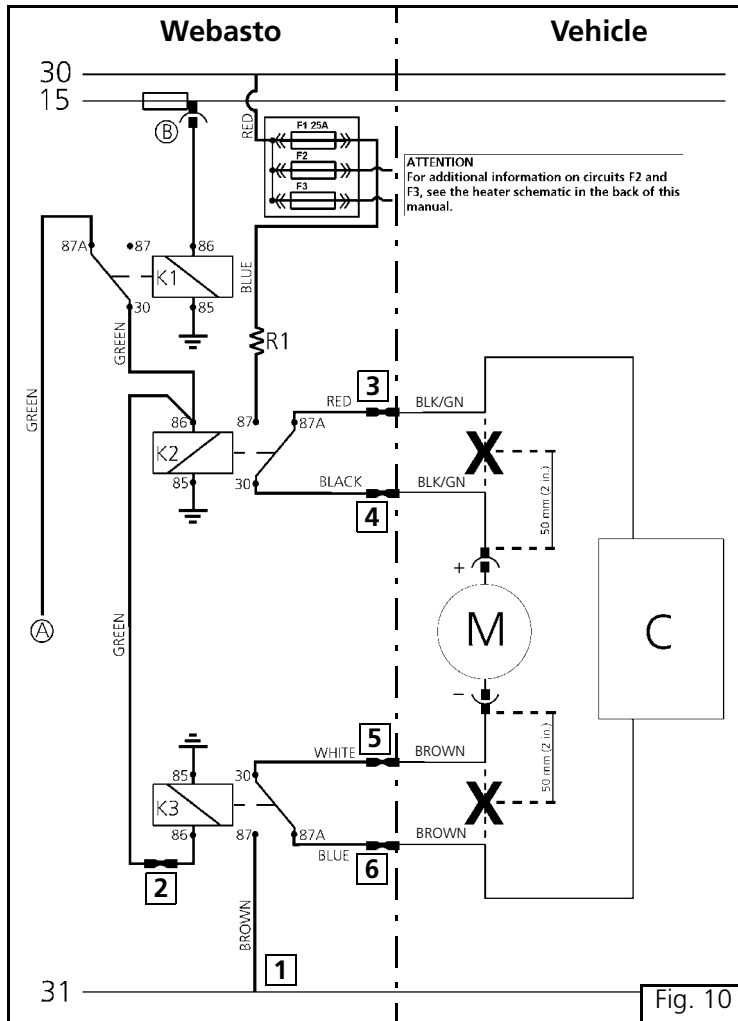


ATTENTION

The blower motor is located under the dash on the passenger side of the vehicle.

- (1) HVAC blower motor
- (2) HVAC blower motor connector





3-Relay HVAC Harness Connections

NOTE:

It is permissible to cut excess length from Webasto HVAC wiring harnesses to fit the application.

Cut motor wires where indicated by "X"

- (1) Chassis ground
- (2) Splice green wire to green wire
- (3) Strip and crimp red wire to (BLK/GN) controller side blower control positive wire
- (4) Strip and crimp black wire to (BLK/GN) motor side blower control positive wire
- (5) Strip and crimp white wire to (BROWN) motor side blower control negative wire
- (6) Strip and crimp blue wire to (BROWN) controller side blower control negative wire

CAUTION

Check your wiring! Ensure that all connections have been done in accordance with the wiring diagram shown (Fig. 10). Sensitive electronic controls can be damaged if wired incorrectly!



Secure HVAC blower control wiring to vehicle structures with nylon wire ties. (Image not available)

NOTE:

Complete heater harness schematics are included on page 22 and 23 of this manual.

Legend for Figure 10

- A From Webasto Heater X1
- B 12 VDC Ignition 'On' Fuse Tap
- C HVAC Control Module
- M HVAC Blower Motor
- X Cut wire at 50 mm (2 in.) from motor
- F1 Fuse - Blower Circuit 25 Amp.
- K1 Relay - Ignition 'On' Interrupt
- K2 Relay - Positive Side of Blower Motor Circuit
- K3 Relay - Negative Side of Blower Motor Circuit
- R1 Resistor - Blower Speed Control
- 30 Battery Positive (Constant Power)
- 15 Ignition (Switched Power)
- 31 Battery Negative (Chassis Ground)



Heater Preparation/Installation

ATTENTION

Remove burs and sharp edges from heater mounting bracket after modification.

Cut supplied mounting bracket as shown in Figure 11.

Bend mounting bracket "ear" inward 90° as shown.

- (1) Heater mounting bracket

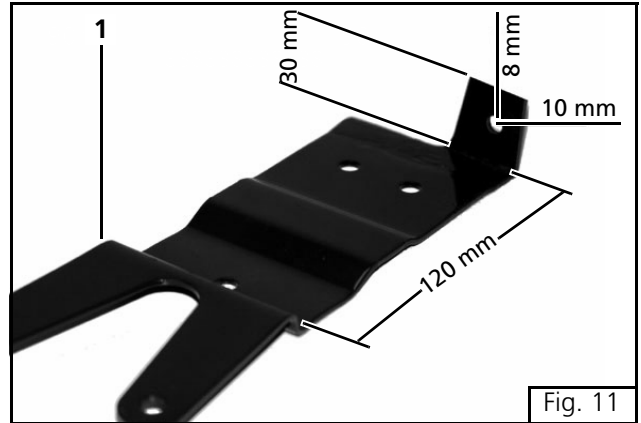


Fig. 11

ATTENTION!

Observe torque specifications.

Install heater mounting bracket with three EJOT screws. Tighten EJOT screws to 10 Nm (88.5 lb.-in.).

ATTENTION

See Figure 38 for correct length of exhaust tube.

Connect air intake tube and exhaust tube to heater prior to installation.

- (1) EJOT screws
- (2) Air intake tube
- (3) Exhaust tube
- (4) Heater mounting bracket

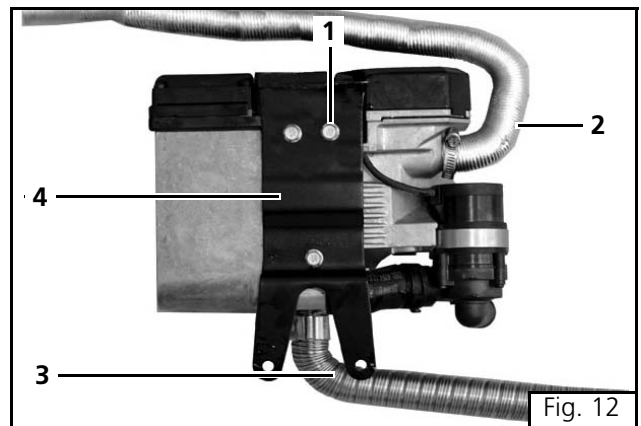


Fig. 12

Relocating Vehicle Relay

ATTENTION

Remove hardware securing coolant recovery tank to vehicle and position tank out of the way.

The relay shown in Figure 13 will have to be relocated in order to mount the Webasto heater.

Remove bolt securing relay to vehicle and relocate relay to engine cover stud. See Figure 14.

- (1) Existing bolt and washer
- (2) Vehicle ABS
- (3) Relay

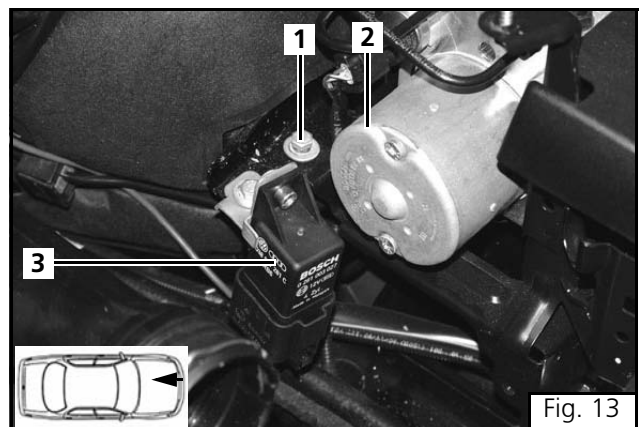


Fig. 13

Mount vehicle relay on engine cover stud with bracket and hardware provided. See Figure 14.

- (1) Engine cover stud
- (2) Bracket
- (3) Vehicle relay

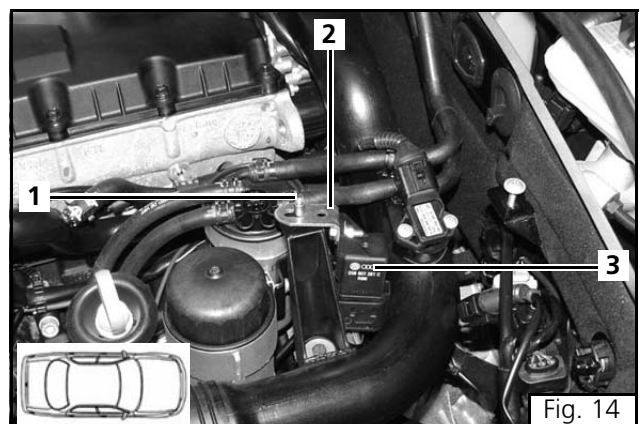


Fig. 14

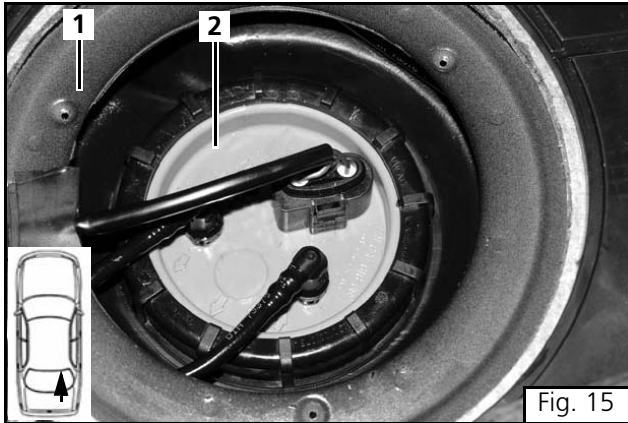


Fig. 15

Integration into the Fuel System

Standpipe Installation

ATTENTION

The vehicle fuel sender can be accessed from inside the vehicle.

Remove the fuel sender from the vehicle following the manufactures service instructions.

- (1) Behind rear passenger seat
- (2) Fuel sender

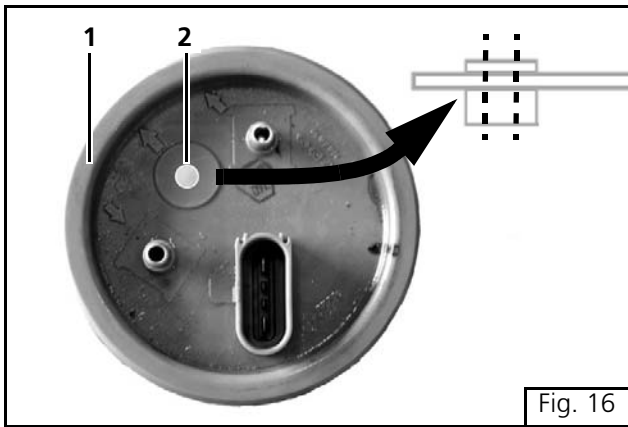


Fig. 16

ATTENTION

To maintain a proper seal and prevent damage to the fuel sender ensure to drill through the center of the raised section on the top of the fuel sender.

Drill a 5/16 in. hole through the fuel sender where shown in Figure 16.

- (1) Fuel sender
- (2) 5/16 in. hole drilled for standpipe

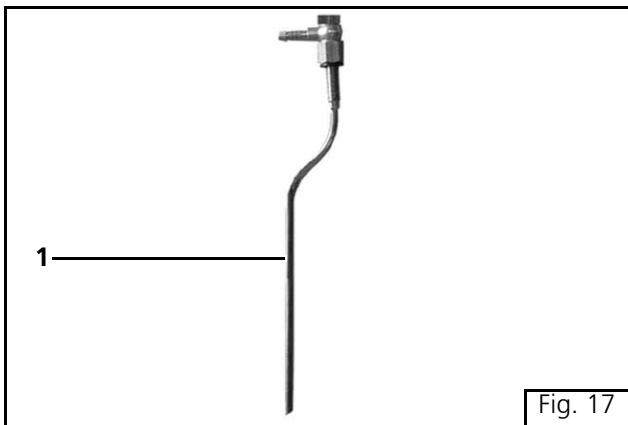


Fig. 17

Standpipe Assembly

ATTENTION

The standpipe tube should terminate approximately 25 mm (1in.) off bottom of tank when installed

Ensure standpipe does not interfere with the float arm.

Cut standpipe at a 45 degree angle and remove burrs before installation.

Bend the standpipe assembly as shown in Figure 17 and cut to length. See Figure 19 for recommended installation.

- (1) Standpipe assembly

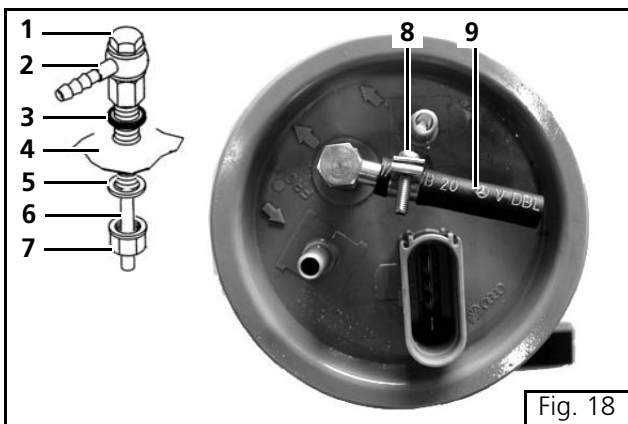


Fig. 18

Install standpipe in fuel sender. Also see Figure 19.

Install fuel line connector on standpipe.

- (1) Banjo bolt
- (2) Banjo fitting
- (3) Sealing washer
- (4) Fuel sender
- (5) Flat washer
- (6) Standpipe
- (7) Locknut
- (8) Fuel line clamp
- (9) Fuel line connector



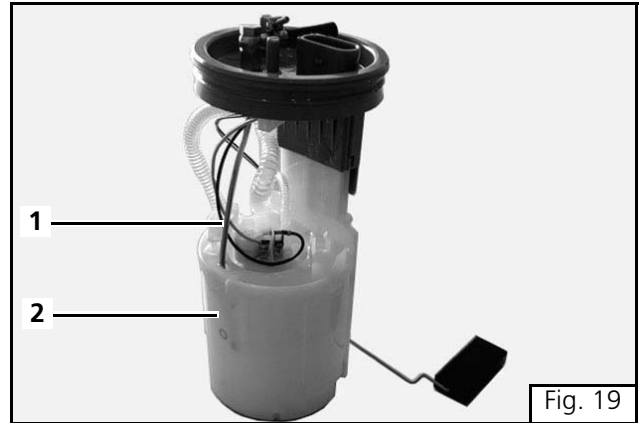
Standpipe Installed

ATTENTION

Ensure fuel sender travel is not impeded by standpipe installation.

Position standpipe in fuel sender cup during installation.

- (1) Standpipe
- (2) Fuel sender cup



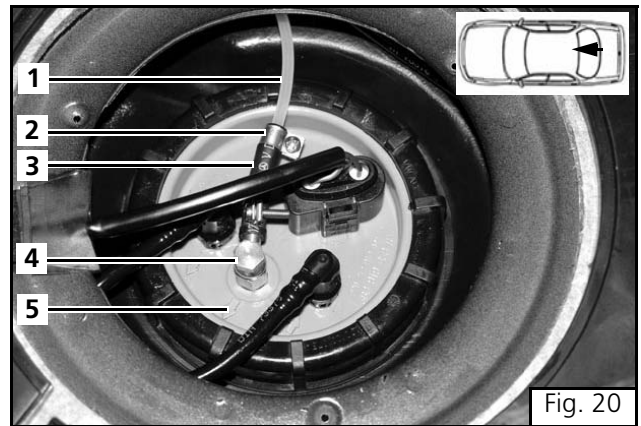
Install fuel sender following the manufacture's service instructions.

Position standpipe as shown in Figure 20. Tighten banjo bolt to 9 +/- 0.5 Nm (80 +/- 4.4 lb in.)

Connect fuel line to standpipe with fuel line coupler.

Route Mecanyl fuel line to fuel pump mounting location. See Figure 22 for location.

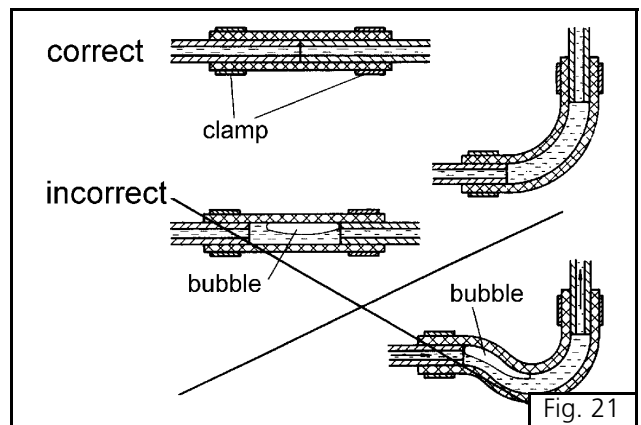
- (1) mecanyl
- (2) Fuel line clamp
- (3) Fuel line coupler
- (4) Fuel standpipe - Banjo bolt
- (5) Fuel sender (installed in tank)



ATTENTION

Ensure the fuel lines are fully seated within the fuel line couplers and any 90 degree bends are not buckled. Refer to Figure 21.

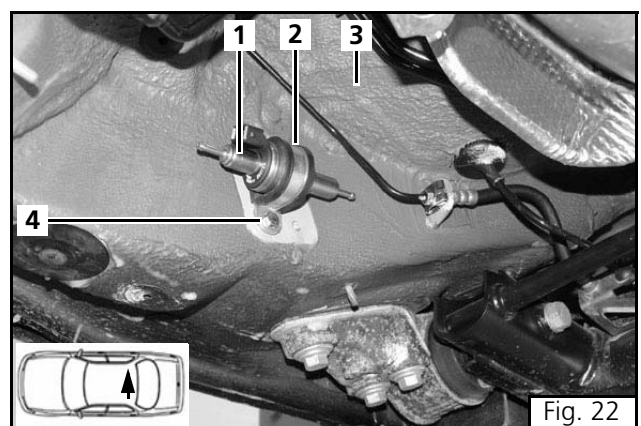
Tighten all fuel line clamps to 1.0 - 1.4 Nm (8.8 - 12.4 lb.-in.)



Fuel Pump Installation

Mount fuel pump to vehicle using existing threaded hole and bolt provided in kit.

- (1) Fuel pump
- (2) P-clamp
- (3) Right-rear side of vehicle (near fuel tank)
- (4) Fuel pump mounting bolt



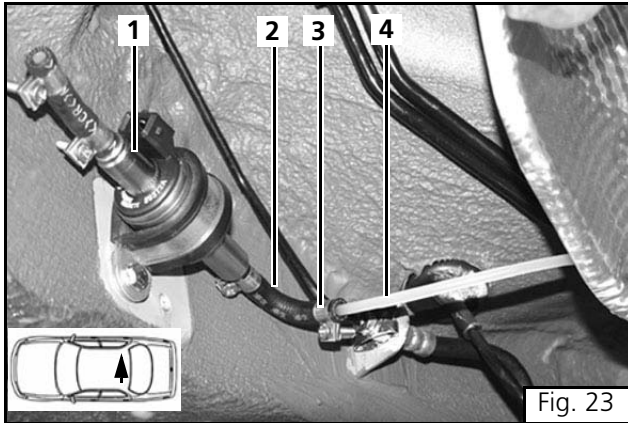


Fig. 23

Connecting Fuel Line to Fuel Pump

ATTENTION

Always cut Mecanyl fuel line with a sharp razor knife or razor edged cutter. Using side cutters, scissors or similar tools will cause a restriction inside the fuel line.

Pre-assemble fuel line couplers on fuel pump before installation.

Connect fuel line to inlet side of fuel pump.

- (1) Fuel pump
- (2) 90° fuel line coupler
- (3) Fuel line clamp
- (4) Mecanyl fuel line from sender

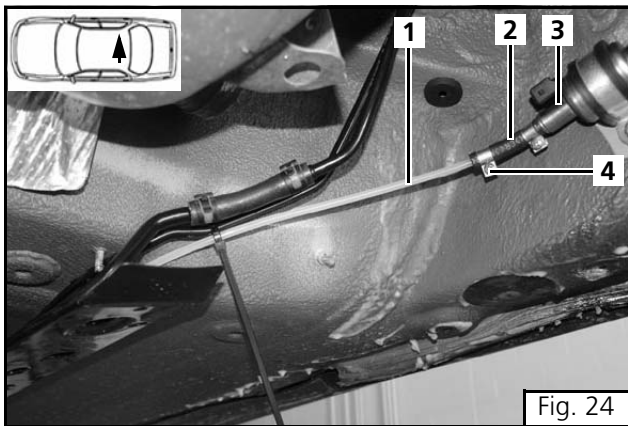


Fig. 24

Connect fuel line to outlet side of fuel pump and tighten fuel line clamp.

- (1) Mecanyl fuel line to heater
- (2) Fuel line coupler
- (3) Fuel pump
- (4) Fuel line clamp

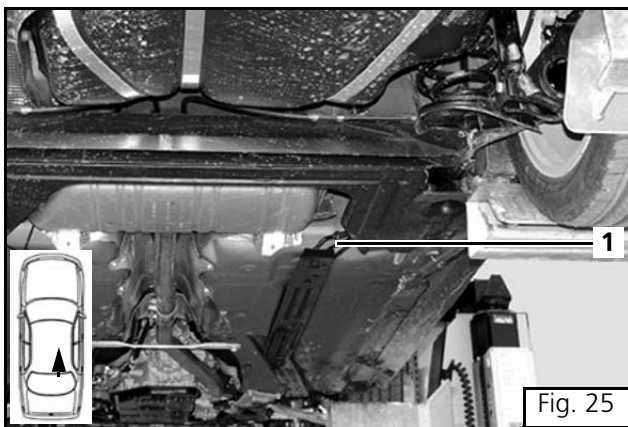


Fig. 25

Fuel Line and Electrical Harness Routing

Route Mecanyl fuel line from fuel pump outlet to engine compartment following vehicle fuel lines.

Route fuel pump electrical harness to fuel pump mounting location following Mecanyl fuel line.

Secure Mecanyl fuel line and electrical harness to vehicle with nylon cable ties.

- (1) Vehicle fuel line

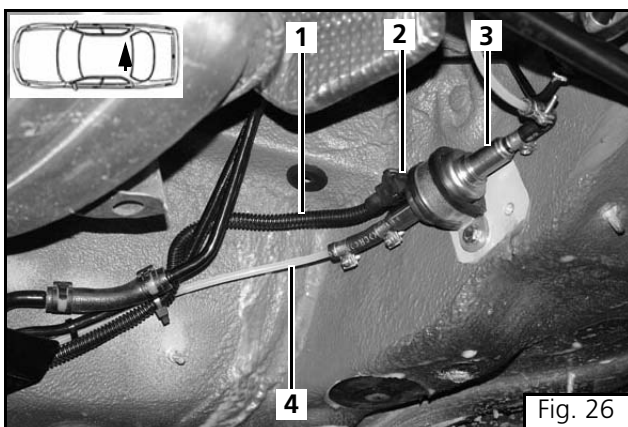


Fig. 26

Install fuel pump electrical harness connector following the instructions provided and connect harness to fuel pump.

Secure Mecanyl fuel line and electrical harness to vehicle with nylon cable ties.

- (1) Fuel pump electrical harness
- (2) Fuel pump electrical harness connector
- (3) Fuel pump
- (4) Mecanyl fuel line



Route the Mecanyl fuel line across the engine compartment toward the left side of the engine.

- (1) Mecanyl fuel line

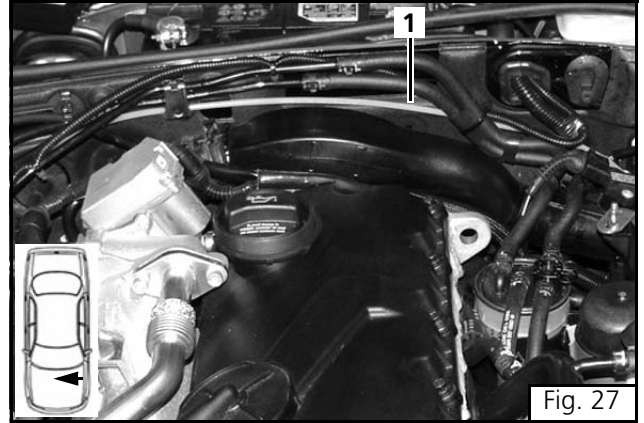


Fig. 27



CAUTION

Ensure the Mecanyl fuel line and fuel pump electrical harness are secured away from the vehicle's exhaust components.

Route Mecanyl fuel line to heater mounting location.

- (1) Mecanyl fuel line

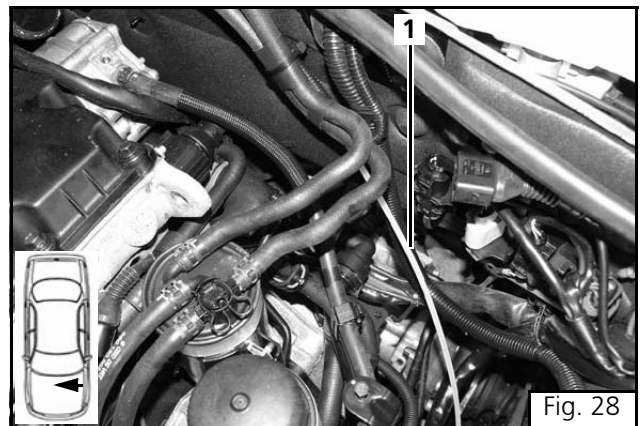


Fig. 28



Integration into the Coolant System

ATTENTION

Torque hose clamps to 2.0 - 2.5 Nm (18 - 22 lb-in.)

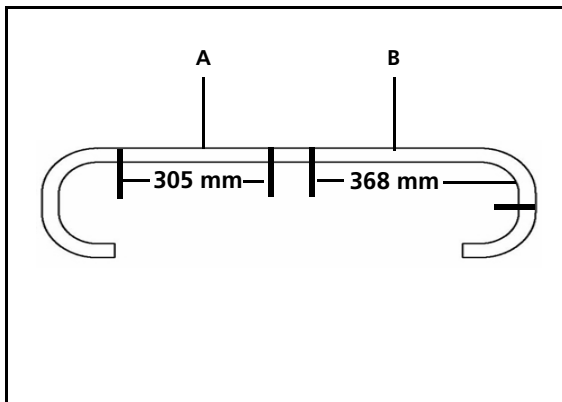
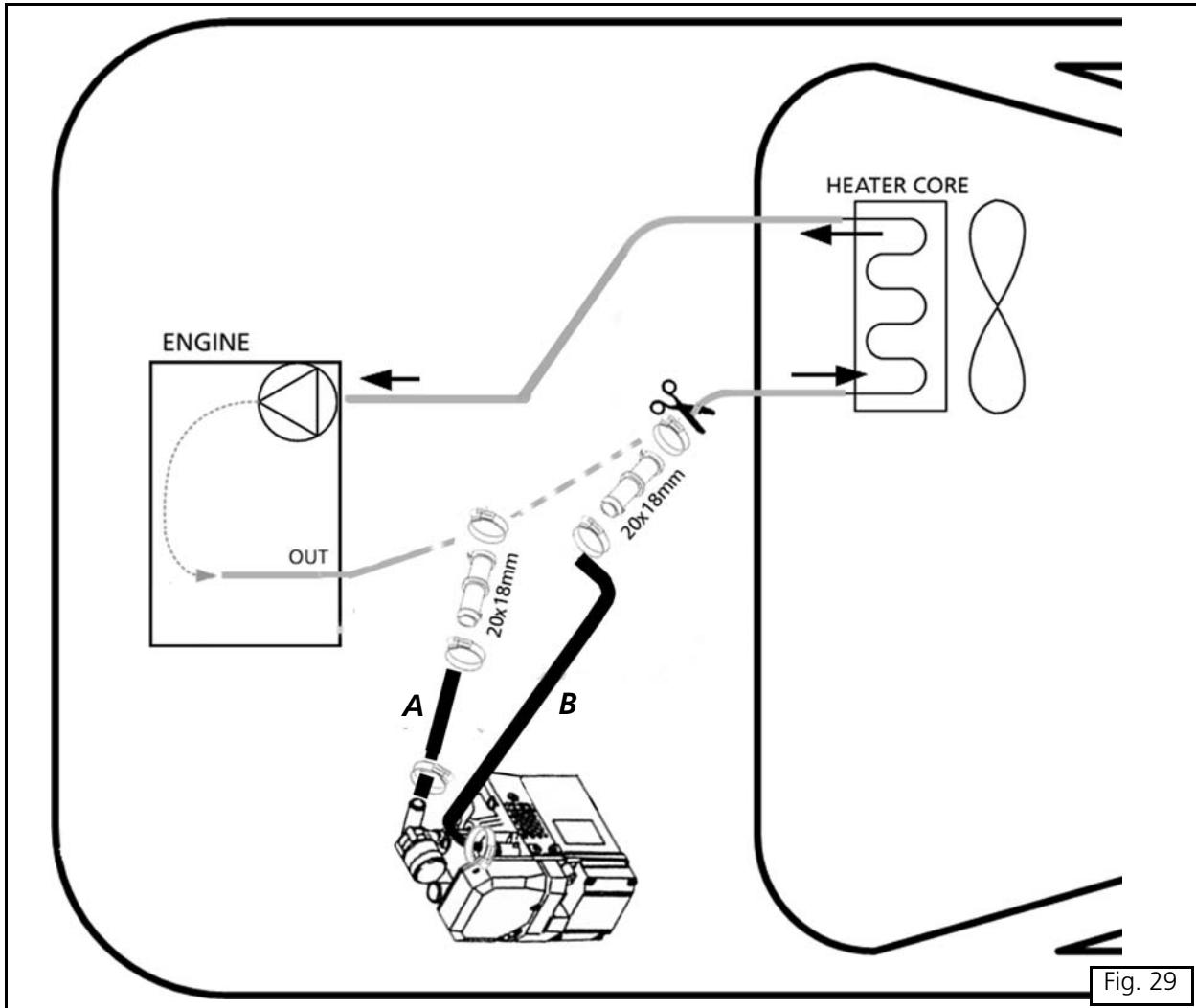
Avoid sharp bends and kinks when installing coolant hoses.

Position hose clamps in such a way to avoid cutting or damaging adjacent components.

ATTENTION

Clamp vehicle coolant hose with hose clamping pliers prior to cutting to prevent coolant spillage.

The coolant heater integration into the vehicle heater circuit is done in an "INLINE" fashion. Refer to Figure 29.



Coolant flow and connection detail

ATTENTION

Cut supplied coolant hose to lengths shown in illustration. Connect the 90 degree end of hose "B" to the coolant hose going to the heater core.

Hose A: From engine block to Webasto coolant pump inlet.

Hose B: From Webasto heater outlet to vehicle heater core.

NOTE:

Also see the plumbing schematic, page 23, of this manual for a general outline of the coolant circuit arrangement.





Hose Connections at Heat Exchanger

ATTENTION

Determine coolant flow before cutting coolant hoses. The Webasto heater is plumbed inline with the heater core supply hose.

- (1) Heater core return hose
- (2) Heater core supply hose

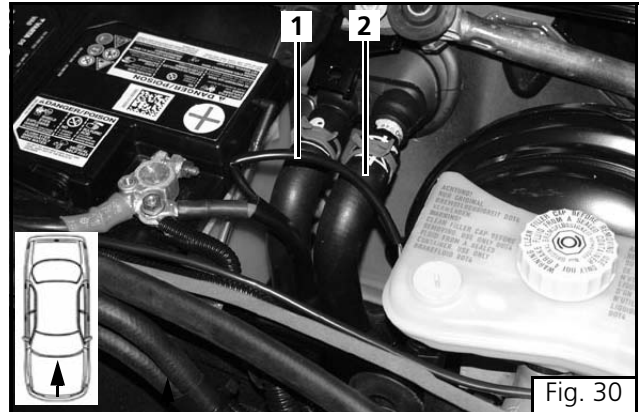


Fig. 30

Webasto Coolant Hose Integration Point

ATTENTION

Clamp off heater core supply hose to prevent coolant loss.

Cut heater core supply hose where shown in Figure 31.

- (1) Heater core supply hose

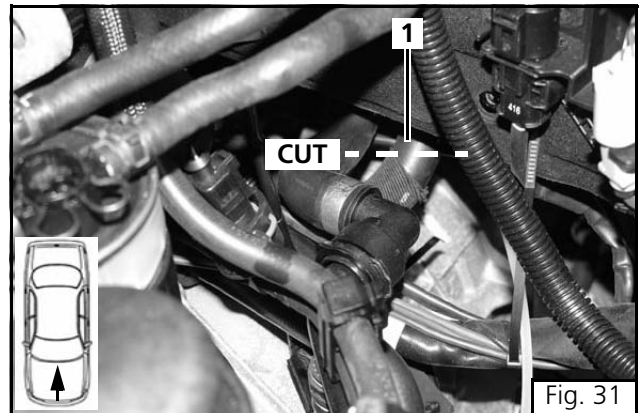


Fig. 31

Webasto Heater Outlet Hose Installation

Connect heater outlet hose (90° end) to heater core inlet with coolant hose coupler and two hose clamps.

Secure heater hoses with nylon cable ties.

- (1) Hose clamp and heater core inlet hose
- (2) Coolant hose coupler
- (3) Hose clamp
- (4) Heater outlet hose (90° end)

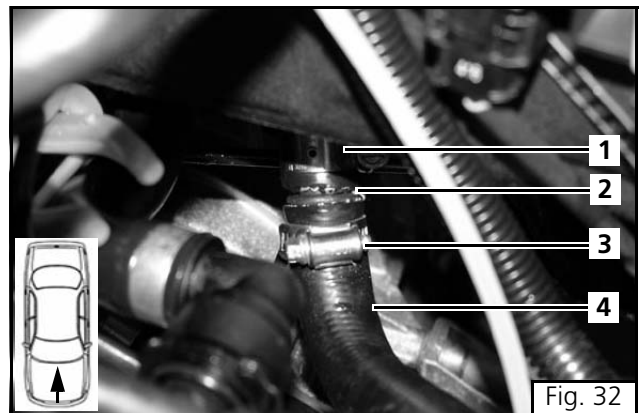


Fig. 32

Webasto Heater Inlet Hose Installation

Connect vehicle heater hose to webasto heater inlet hose with coolant coupler.

- (1) Vehicle heater hose (from block)
- (2) Hose clamp
- (3) Coolant hose coupler
- (4) Hose clamp
- (5) Webasto heater inlet hose

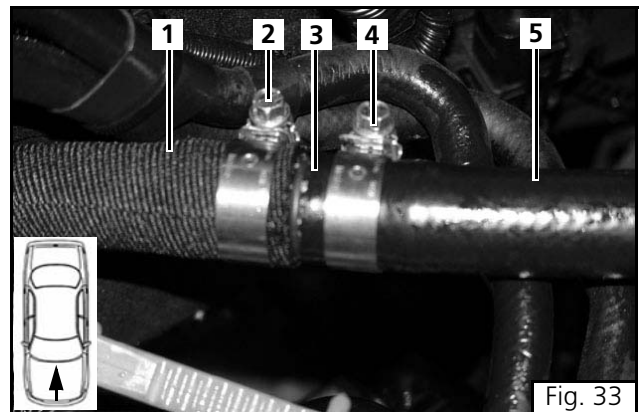
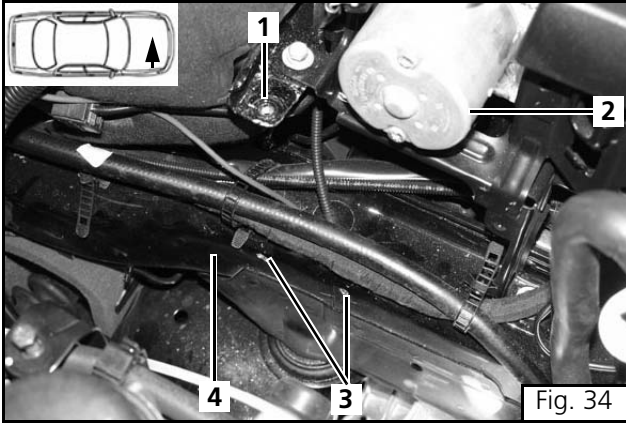


Fig. 33

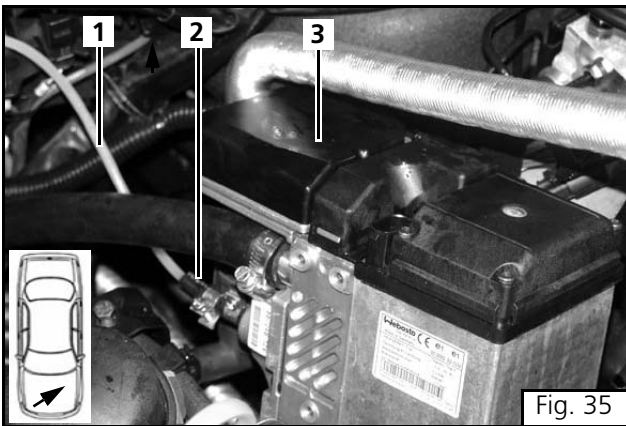




Heater Mounting Site

Use existing bolt and washer removed during relay relocation to hang the heater. Mark location of lower mounting holes and remove heater and bracket assembly. Drill two pilot holes in left frame rail where marked.

- (1) Heater mounting location
- (2) Vehicle ABS
- (3) Lower mounting hole locations
- (4) Left frame rail



Connecting Mecanyl Fuel Line to Heater

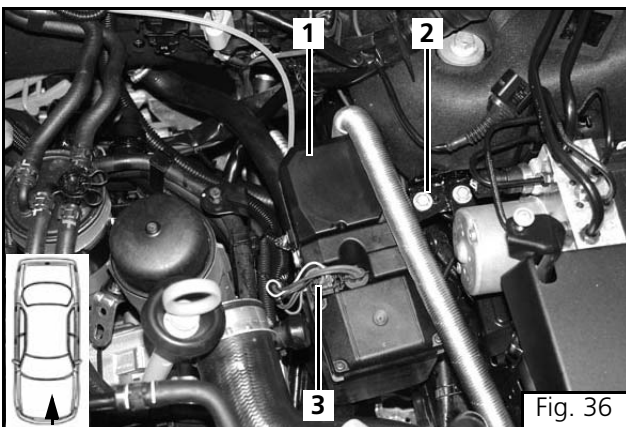
ATTENTION

Ensure the fuel line is fully seated within the fuel line coupler. Tighten fuel line clamps to 1.0 - 1.4 Nm (8.8 - 12.4 lb.-in.)

Position the heater in the approximate mounting location.

Connect Mecanyl fuel line to heater inlet with fuel line coupler.

- (1) Mecanyl fuel line
- (2) Fuel line coupler
- (3) Heater



Mounting the Heater

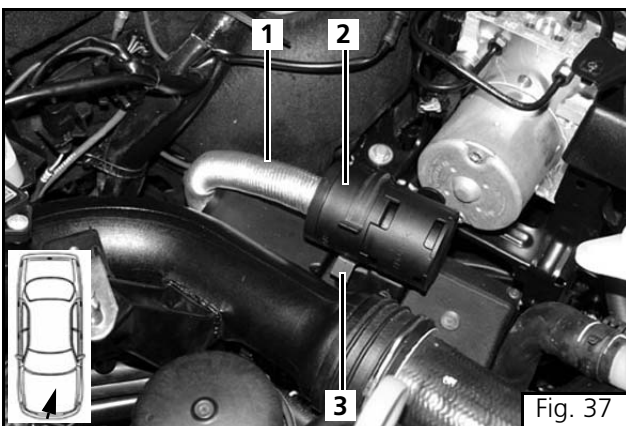
ATTENTION

Connect heater inlet and outlet hoses before mounting heater to vehicle.

Mount heater on vehicle with existing hardware and two self-tapping screws provided in kit.

Connect heater control harness at this time.

- (1) Webasto heater
- (2) Existing bolt and washer
- (3) Heater control harness



Air Intake Silencer Installation

Install air intake silencer on silencer tube.

Remove knock-out from top of heater. Secure air intake silencer to the top of the heater with large plastic clamp.

- (1) Air intake silencer tube
- (2) Air intake silencer
- (3) Clamp



Exhaust System

Cut the exhaust tube as shown in Figure 38.

- (a) Exhaust tube = 838 mm (33 inches)
- (b) Tailpipe = 102 mm (4 inches)

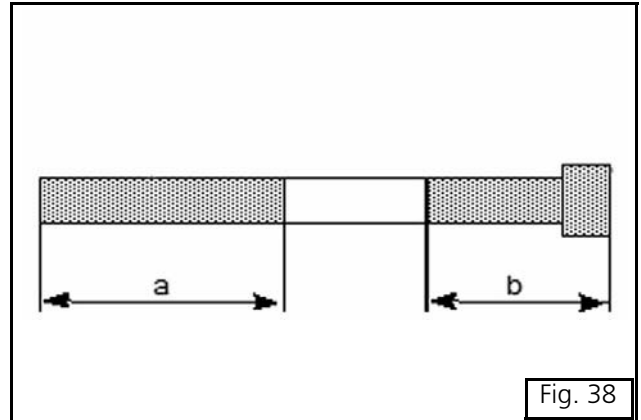


Fig. 38



ATTENTION

Keep exhaust tube away from heat sensitive vehicle components.

Bend muffler mounting bracket as necessary to mount muffler to unibody rail.

- (1) Tailpipe
- (2) Exhaust clamp
- (3) Muffler
- (4) Exhaust tube
- (5) L Bracket, vehicle stud, and P-clamp
- (6) Exhaust clamp
- (7) L bracket, vehicle stud and speed nut

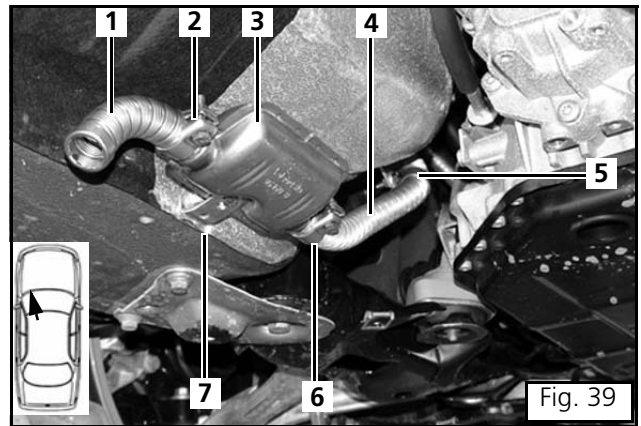


Fig. 39

Power and Ground Connections

Attach the control harness power lead (red wire) to the positive battery cable.

Attach the control harness ground lead (brown wire) to the negative battery cable.

- (1) Control harness power lead
- (2) Control harness ground lead



Fig. 40

Fuse Tap Connection - Relay K-1



ATTENTION

Tap into the "fused" output side of the selected fuse. Fuse must remain hot with the ignition in the "ON" position only.

Route blue fuse tap wire from relay K-1, to the interior fuse/relay center.

- (1) Interior fuse/relay center
- (2) Fuse tap

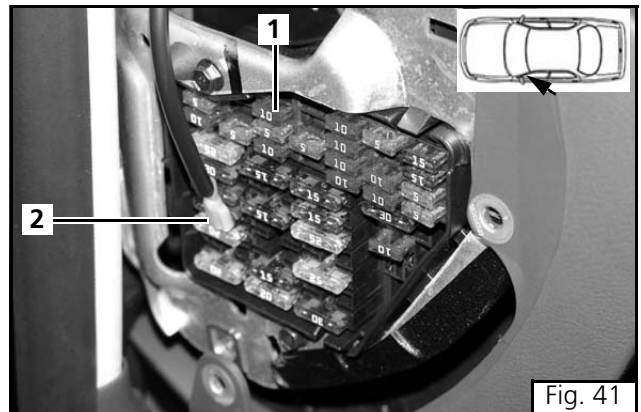


Fig. 41

Final Inspection Initial Start-up and Concluding Work

Connect battery ground terminal

Final Inspection

Inspect installation for:

- Loose fasteners.
- Exhaust system routing and clamp tightness.
- Combustion air intake tube routing and clamp tightness.
- Loose coolant line clamps.
- Pinched coolant lines.
- Routing of coolant lines and coolant lines securely tied and protected against chafing and related damage.
- Loose fuel line clamps.
- Routing of fuel lines and fuel lines securely tied and protected against chafing and related damage.
- Loose wiring connections and battery connections.
- routing of wiring harness and wiring harness securely tied and protected against chafing and related damage.
- Check operation of vehicle heater fan with Webasto heater OFF.

Initial Start-up

- 1 Top off cooling system with coolant per engine/vehicle manufacturers recommendations.

ATTENTION

The fan speed control knob has to be between low and maximum for blower operation while the Webasto heater is on. The position of the control knob does not change the speed of the blower while the heater is on.

- 2 Set interior heater control to maximum heat position (hot), fan speed between low and maximum, and switch off air conditioning system.
- 3 Start the vehicle engine and run on fast idle for 5 minutes to purge any remaining air from the Webasto heater and coolant system. While the engine is running check:
 - Hose connections for leaks.
 - Coolant level in expansion tank. (Add coolant as needed)
- 4 Switch off the engine.

ATTENTION

More than one start-up attempt of the heater may be required to purge air from fuel system before heater will start. Cycle heater Off and On after each failed start attempt until heater starts successfully. After 3 consecutive unsuccessful start attempts, the Webasto control unit enters into heater lockout.

See Heater Lockout section for reset instructions.

- 5 Switch on the Webasto heater by means of the instant heat button on timer and check:
 - Timer panel and instant heat indicator illuminates.
 - Circulating pump in operation.
 - Initiation of start-up sequence.
 - Successful start-up and operation.
- 6 Allow heater to run for 20 minutes or until coolant is heated to temperature. Re-tighten all hose clamps.

ATTENTION

Engine coolant temperature gauge may read lower than actual Webasto heater output temperature.

This is due to the location of the temperature gauge sensor on engine.

Concluding Work

- Check that all hose lines, hose clamps, pipe clips and electrical connections are secure. Secure all loose lines and cables with nylon cable ties.
- Spray the heater components and electrical connections with an anti-corrosive wax coating.
- Install all vehicle parts, panels and components removed during heater installation.

Heater Lockout Reset Procedure

The BlueHeat is designed with a lockout safety feature built into the control unit. After 3 consecutive unsuccessful startup attempts, the heater will lock itself out from any further start attempts. The heater may also enter the lockout mode after experiencing an overheat condition.

Reset Heater "Lockout" mode by performing the following procedure:

- 1 Ensure timer or switch is in the "OFF" position. Turn timer or switch to the "On" position. Remove main fuse F2 (20 Amp), reinsert after 5 seconds.
- 2 Cycle timer or switch off and then back on once more. Remove fuse F2 once again and reinsert after 5 seconds. Heater should attempt to start after inserting fuse.

ATTENTION

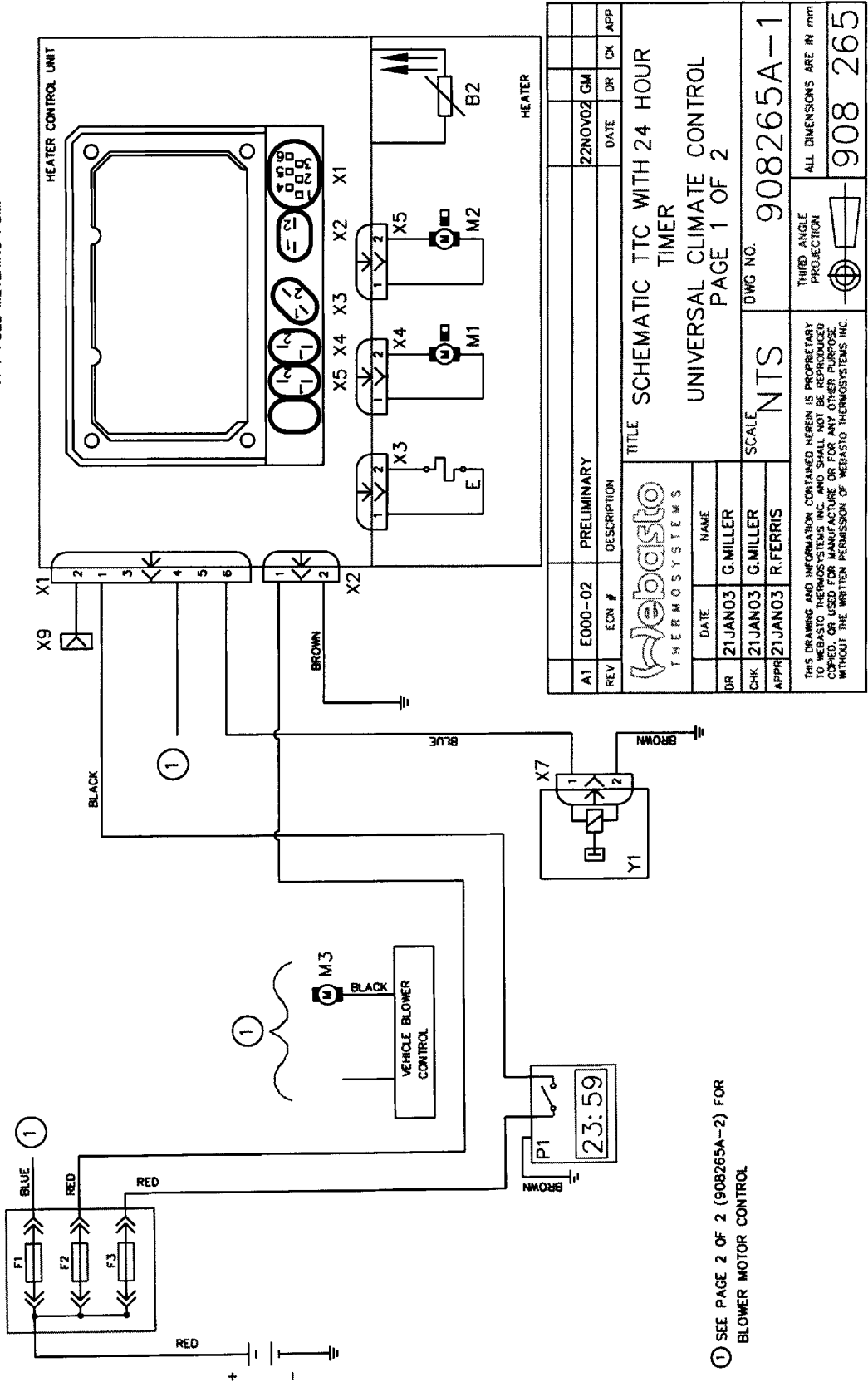
- The engine coolant must be below 86 °F (30 °C) before the Webasto heater will attempt to start.
- Should the heater fail to start or operate correctly, contact your Webasto technical representative at:

1-800-555-4518

VW Passat

Electrical Harness Schematic - Part 1, Heater Control

- B2 : TEMPERATURE SENSOR - COOLANT
- E : CERAMIC IGNITOR / FLAME DETECTOR
- F1 : 25A BLOWER INTERLOCK
- F2 : 20A HEATER
- F3 : 2A TIMER
- K1 : IGNITION BLOWER CONTROL RELAY
- K2 : BLOWER RELAY 1
- K3 : BLOWER RELAY 2
- M1 : COMBUSTION AIR FAN
- M2 : COOLANT CIRCULATING PUMP
- M3 : VEHICLE BLOWER HTR/AC
- P1 : TIMER 24 HOUR
- R1 : RESISTOR 10HM/50W
- X9 : DIAGNOSTIC LINK
- Y1 : FUEL METERING PUMP



REV	ECN #	DESCRIPTION	DATE	DR	CK	APP
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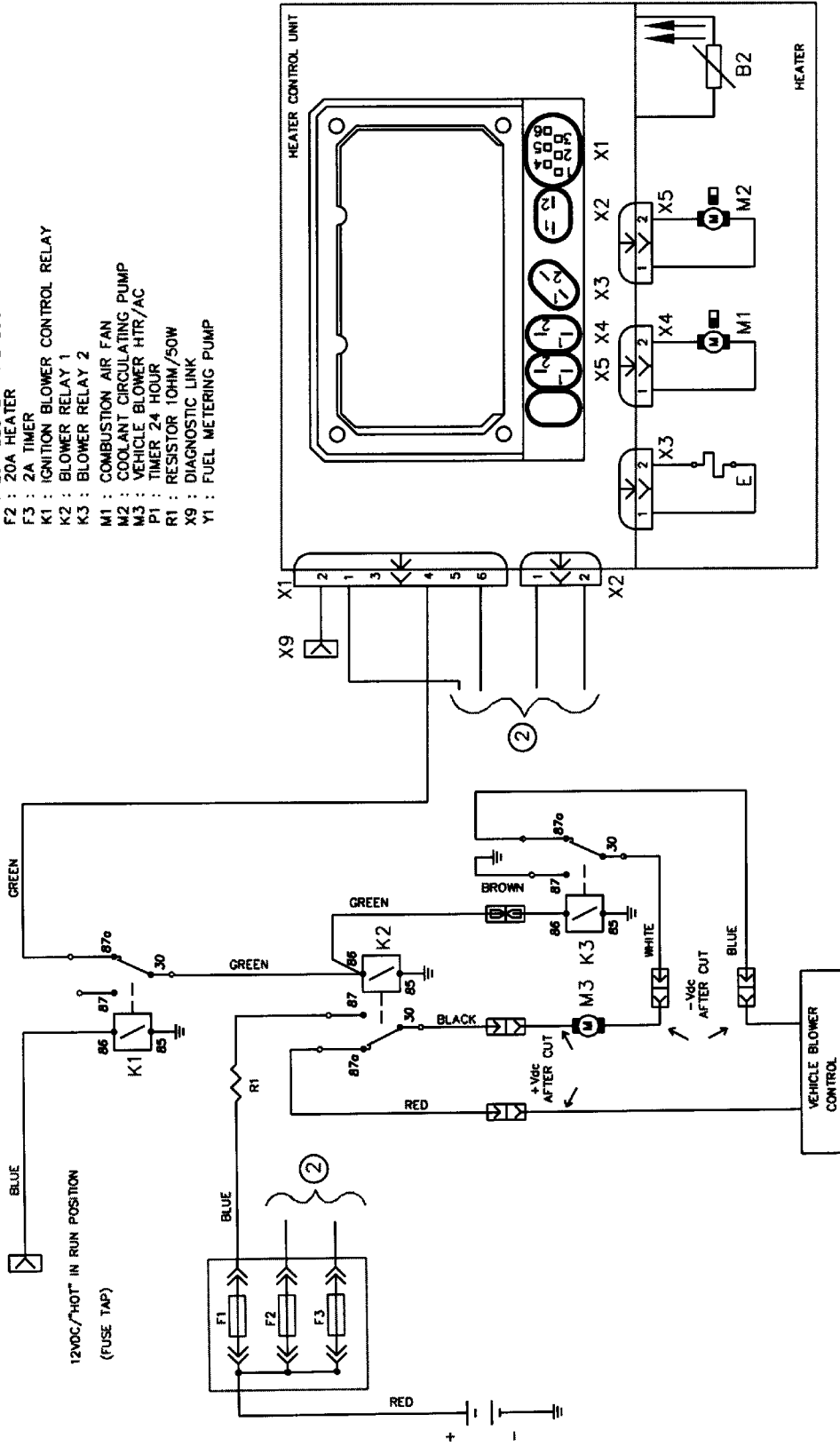
		TITLE SCHEMATIC TTC WITH 24 HOUR TIMER UNIVERSAL CLIMATE CONTROL PAGE 1 OF 2	
DR	21JAN03	NAME	G.MILLER
CHK	21JAN03	SCALE	NTS
APPR	21JAN03	DWG NO.	908265A-1

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		ALL DIMENSIONS ARE IN mm 908 265

① SEE PAGE 2 OF 2 (908265A-2) FOR BLOWER MOTOR CONTROL

Electrical Harness Schematic - Part 2, HVAC Blower Control

- B2 : TEMPERATURE SENSOR - COOLANT
- E : CERAMIC IGNITOR / FLAME DETECTOR
- F1 : 25A BLOWER INTERLOCK
- F2 : 20A HEATER
- F3 : 2A TIMER
- K1 : IGNITION BLOWER CONTROL RELAY
- K2 : BLOWER RELAY 1
- K3 : BLOWER RELAY 2
- M1 : COMBUSTION AIR FAN
- M2 : COOLANT CIRCULATING PUMP
- M3 : VEHICLE BLOWER HTR/AC
- P1 : TIMER 24 HOUR
- R1 : RESISTOR 10HM/50W
- X1 : DIAGNOSTIC LINK
- X9 : FUEL METERING PUMP



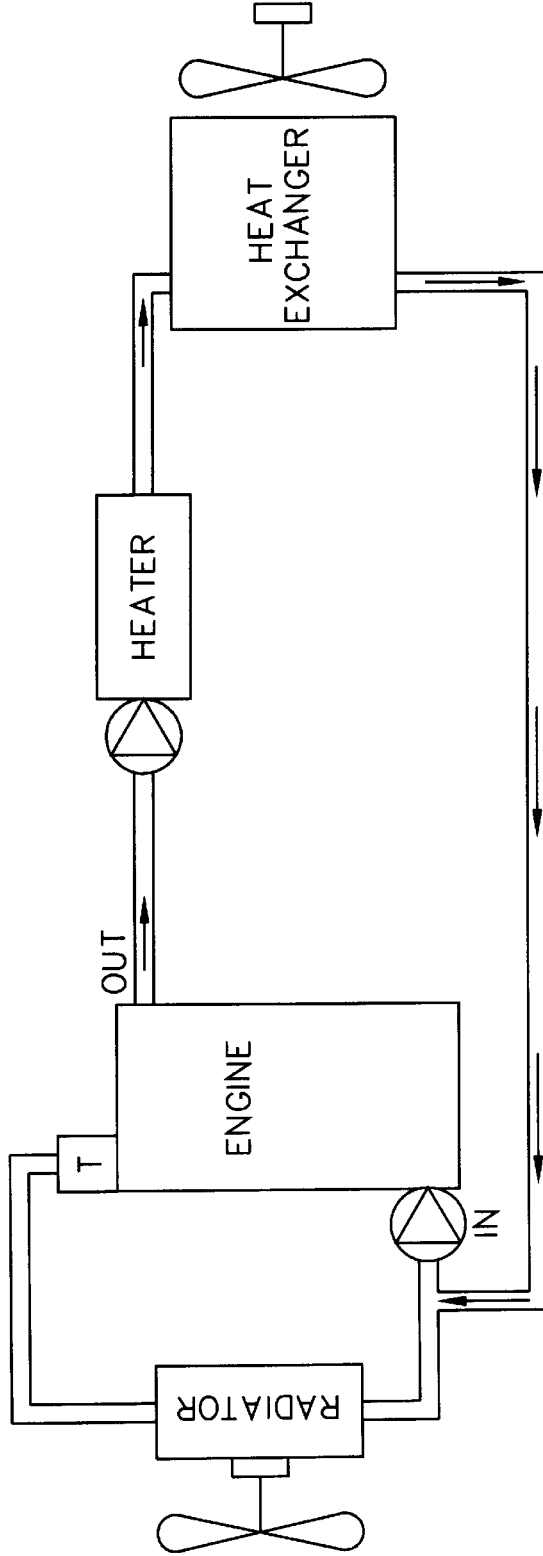
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DR	DATE	NAME	
CHK	21JAN03	G.MILLER	
APPR	21JAN03	R.FERRIS	
SCALE		NTS	DWG NO. 908265A-2
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			ALL DIMENSIONS ARE IN mm 908 265

FUNCTION : WHEN HEATER IS SWITCHED ON AND COOLANT REACHES 60°C (140°F) THE WEBASTO HEATER SENDS A SIGNAL THROUGH K1 TO K2 AND K3 VEHICLE BLOWER WILL COME ON AT LOW SPEED IF A VEHICLE IGNITION SIGNAL IS PRESENT AT K1, THE VEHICLE RETURNS TO NORMAL HVAC/OPERATOR CONTROLS


② SEE PAGE 1 OF 2 FOR ALL OTHER HEATER CONTROLS

Heater Plumbing Schematic - Inline Method

WEBASTO THERMO TOP C INLINE COOLANT SCHEMATIC



 = THERMOSTAT

 = COOLANT PUMP (2 PLC'S)

A1	E1B2-02	DRAWING RELEASED	21AUG02	BW	EK	MG
REV	ECN #	DESCRIPTION	DATE	DR	CK	APP
Webasto		TITLE				
THERMOSYSTEMS		COOLANT SCHEMATIC TTC INLINE				
DR	21AUG02	B. WALKER	SCALE	NTS		
CHK	21AUG02	E. KOPP	DWG NO.	908255A		
APPR	21AUG02	M. GRUPP	THIRD ANGLE PROJECTION			
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