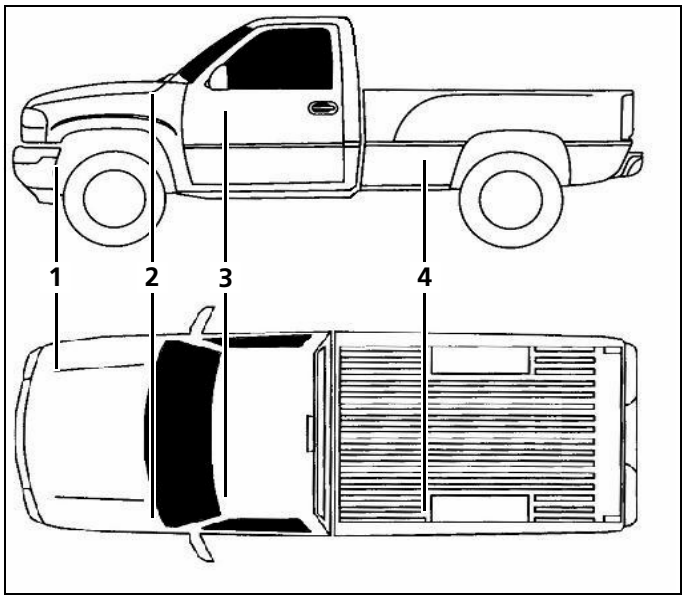
BlueHeat *Coolant Heater*

Webasto
Feel the drive

Thermo Top



GMC Sierra 2500 HD
GMC Sierra 3500 HD

6.6 Liter Duramax Diesel
Beginning Model Year: 2000

Chevrolet Silverado 2500 HD
Chevrolet Silverado 3500 HD

6.6 Liter Duramax Diesel
Beginning Model Year: 2000

Special instructions for these models
Part locations may differ slightly dependent on the vehicle model.

Legend

1 Blue*Heat* 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

Table of Contents

Warning

- *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 or by improper installation.*
- *Improper installation or installation by untrained personnel voids all warranties on this product.*

If there are any questions regarding the installation or maintenance of this product, please call technical support at **1-800-555-4518**.

Parts List

Quantity	Part	Part Number
1	Heater Kit	5000515C
1	Installation Kit	5000652C

Vehicle Information

Manufacturer	Model	Year	Engine Type
GMC	Sierra 2500 HD	Beginning Model Year: 2000	6.6 Liter
GMC	Sierra 3500 HD		6.6 Liter
Chevrolet	Silverado 2500 HD		6.6 Liter
Chevrolet	Silverado 3500 HD		6.6 Liter

Foreword

The installation and service of Webasto Thermo Top series (Blue*Heat*) heaters requires special expertise and training. Installations and servicing of Webasto products by untrained, unauthorized personnel and end-users voids all warranties and releases Webasto Product North America, Inc. and Webasto authorized distributors, dealers and their personnel from responsibility for damage to Webasto products, any resulting collateral property damage and personal injury.

Any use, operation, installation, modification or application of the product not described in Webasto manuals, or subjecting the product to extreme or unusual conditions beyond the limits of specified performance characteristics is misuse of the product.

Failure to comply with all installation instructions is a misuse of Webasto products. The same applies for repairs without using genuine Webasto service parts. This will void the coolant heaters "official Marks of Conformity."

Scope and Purpose

These installation instructions are intended to support Webasto trained and authorized distributors and dealers in the installation of the Thermo Top series (Blue*Heat)* Coolant Heaters. These instructions are not intended for use by untrained or unauthorized personnel.

The directives in the "installation manual" and "operating manual" for the Thermo Top series heater 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

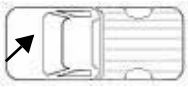

Warning


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.

CAUTION
For reasons of safety due to the weight of fuel and the tank, it is recommended that there be no more than 1/4 tank of fuel present. If fuel quantity is greater than 1/4 of capacity, make provisions to reduce quantity of fuel or consider removal of pick-up box to gain access to fuel sender location if feasible.

– Disconnect negative terminal of vehicle battery(s).
– Remove air cleaner, air cleaner housing and air cleaner mounting tray. Refer to vehicle manufacturers instructions.
– Remove instrument panel fascia for timer mounting. Refer to vehicle manufacturers instructions for fascia removal.
– Protect vehicle fenders, panels and interior with covers

Heater Installation Site

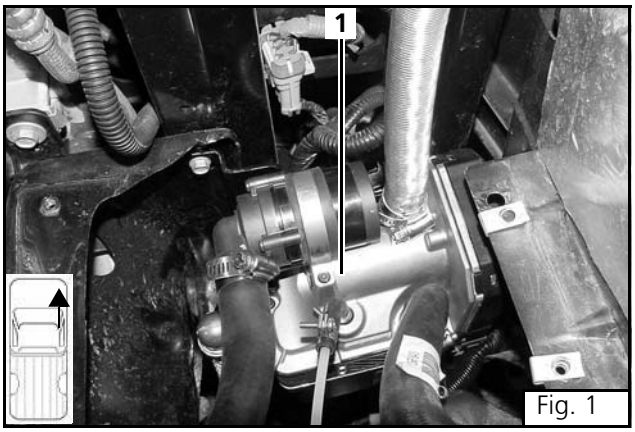


Fig. 1

– (1) Webasto Auxiliary Coolant Heater (Installed)

ATTENTION
The Webasto Auxiliary Coolant Heater is to be installed at the right front corner, under the air cleaner housing. (Shown with air cleaner housing and tray removed.)

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.

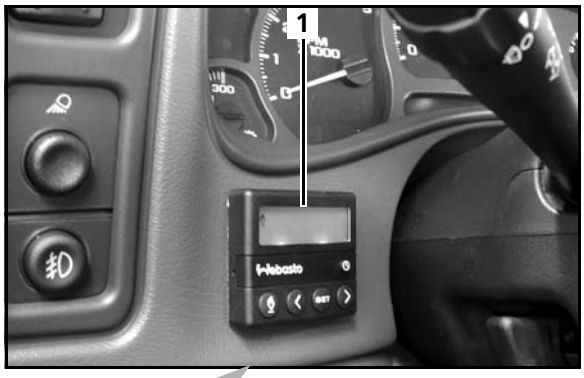
ATTENTION
Timer control location is a recommendation only. Please consult with the customer before mounting.

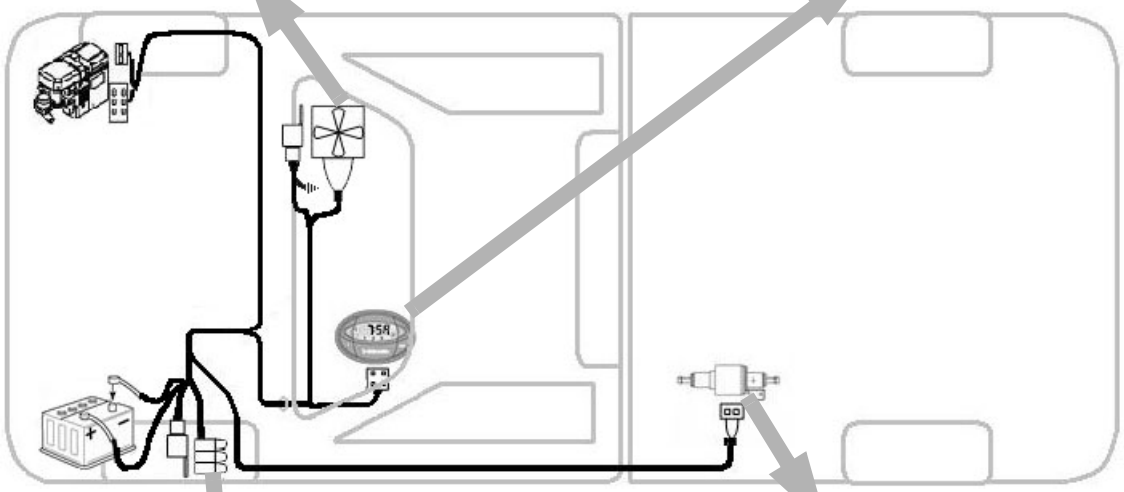
HVAC Blower Motor

(1) Blower relay K3

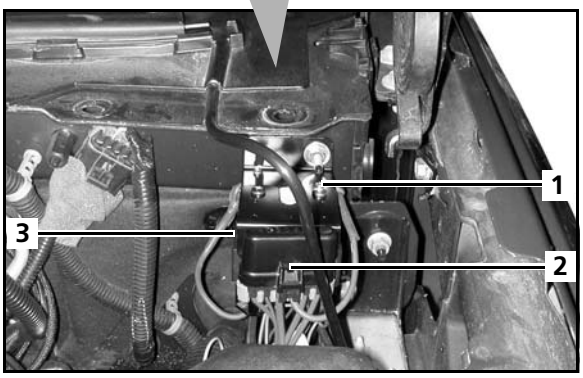
Timer Control

(1) Timer



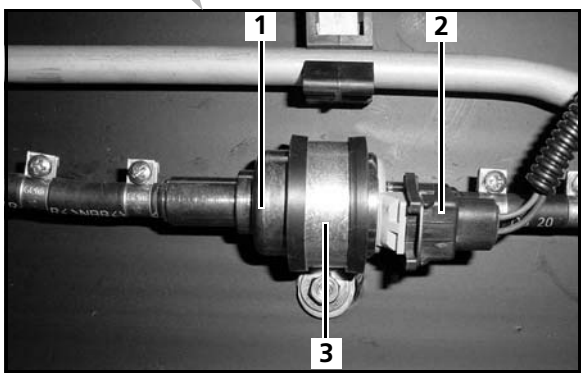


Fuse Block/Relays/Resistor



(1) Mounting Bracket
(2) Fuse Holder
(3) Relays K1 & K2 (back of bracket)

Fuel Metering Pump



(1) Pump
(2) Connector
(3) Mount Strap

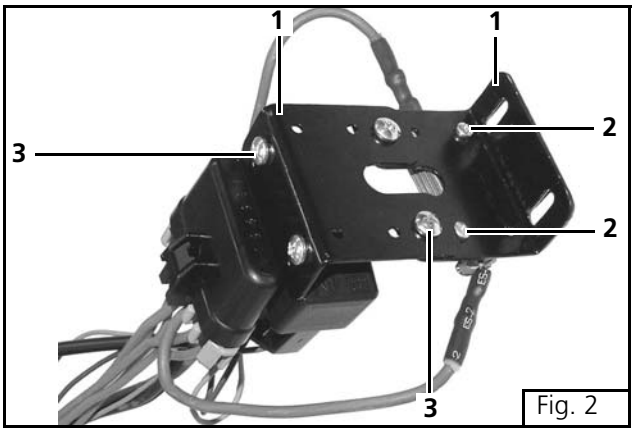


Fig. 2

Electrical Harness

ATTENTION

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

To attach fuse holder to bracket, a 6.0 mm (1/4 in.) can be drilled through the bracket. Attach fuse holder with plastic anchor included. Assemble as shown.

– (1) Mounting Bracket (2 required)
– (2) Screw M3x10, Nut M3
– (3) Pan Head Screw 10-32x5/8", Nut 10-32

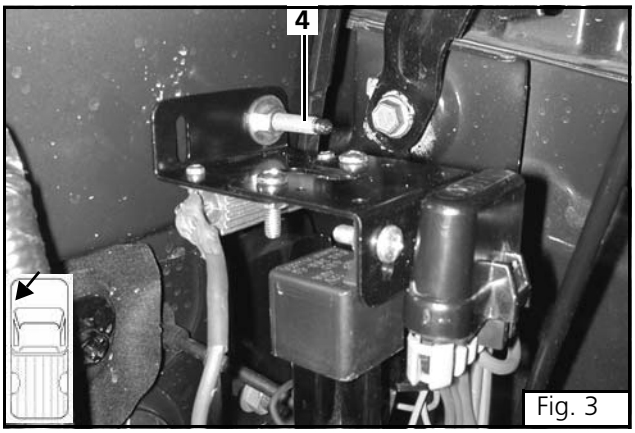


Fig. 3

– (4) Existing vehicle stud and nut

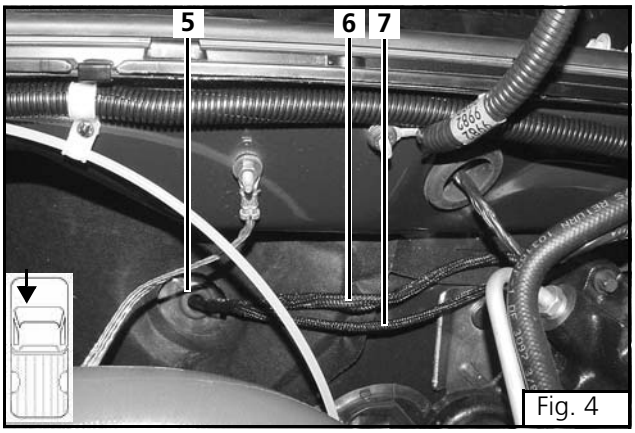


Fig. 4

CAUTION

Check behind bulkhead for obstructions before drilling hole.

– (5) Drill 20 mm (3/4 in.) hole, insert grommet
– (6) Route blower harness through grommet
– (7) Route timer harness through grommet

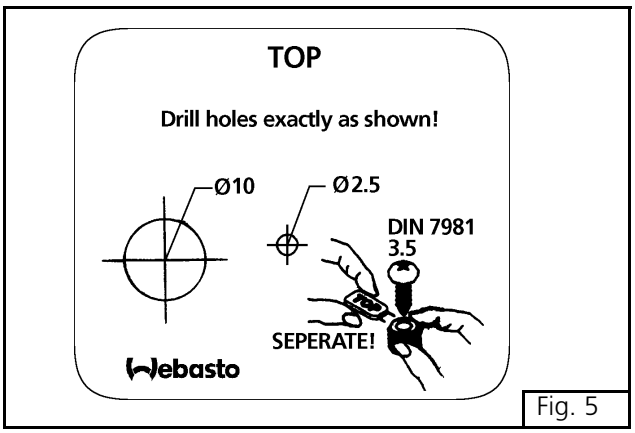


Fig. 5

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 5 shows a translated sample of the template supplied.

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

– (1) Timer - Sample location only

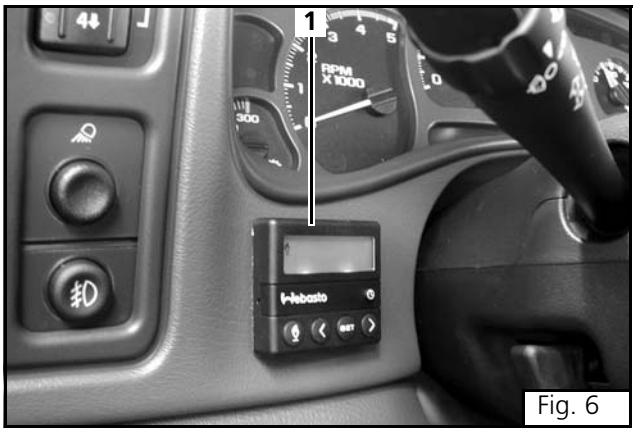


Fig. 6

Fuse Tap Connection - Relay K-1

Route blue fuse tap wire from relay K-1, up into the under hood fuse panel.

– (2) Fuse tap wire
– (3) Fuse tap

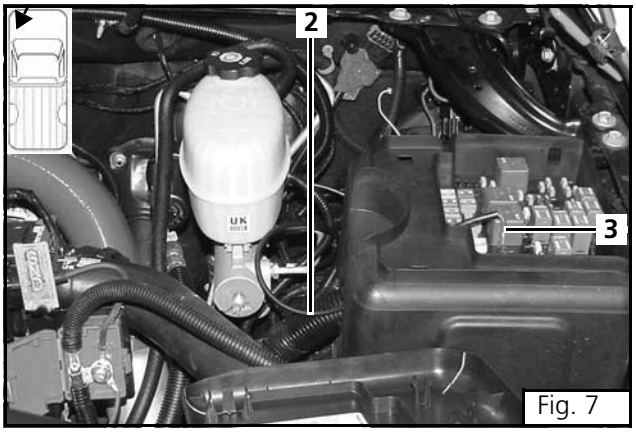


Fig. 7

CAUTION
Tap into the "fused" output side of the selected fuse.

– (3) Fuse tap - close up

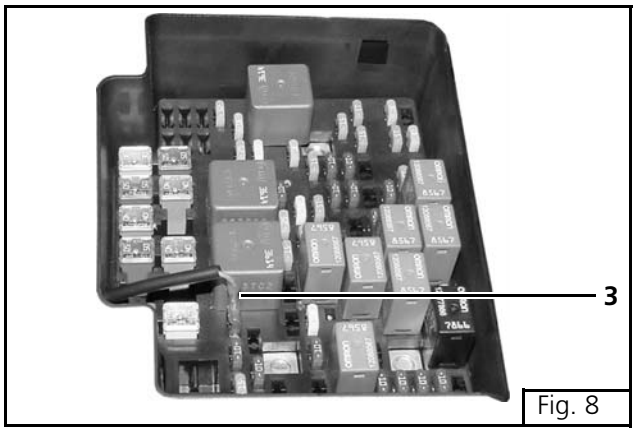


Fig. 8

Integration into the Blower System

Remove panel to access blower area.
Route Blower harness over to blower area.
Mount negative-side blower harness and relay in vicinity of HVAC blower.
Wire according to schematic in Figure 10.

– (1) Positive-side blower integration harness
– (2) Ground point (see item 1, Figure 10)
– (3) Relay K-3 of negative-side harness
– (4) HVAC blower motor

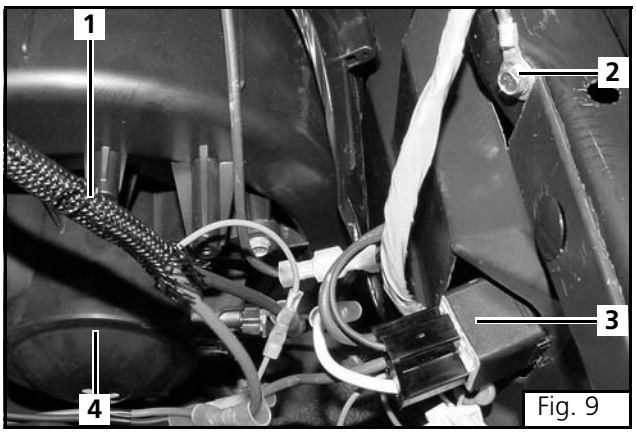


Fig. 9

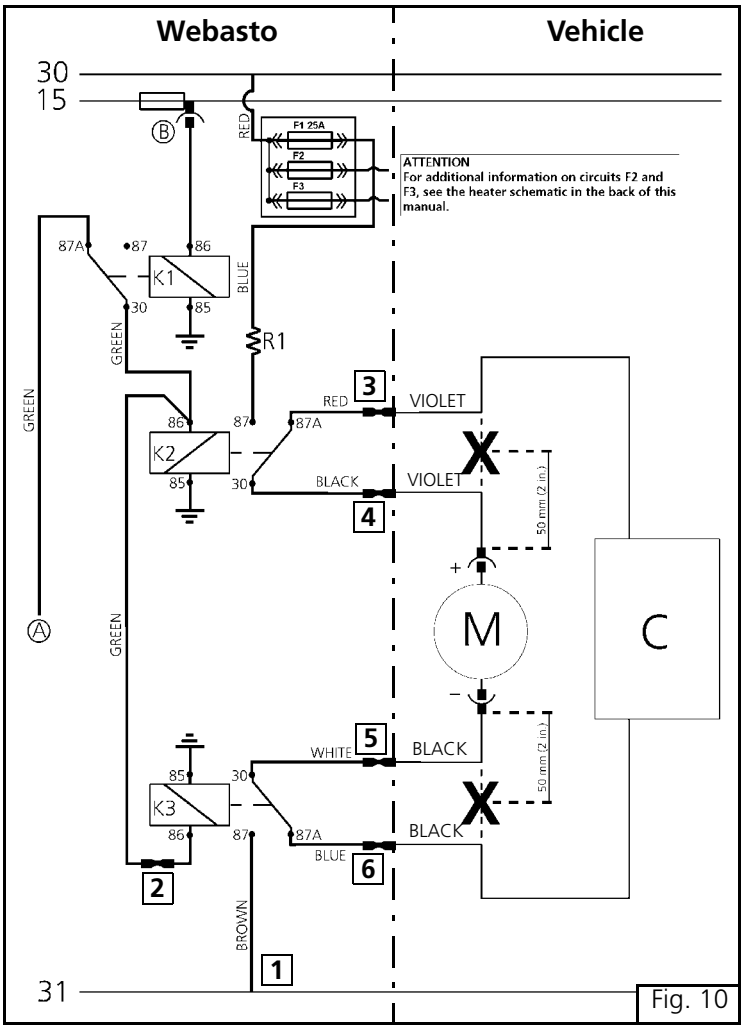


Fig. 10

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 to controller side violet wire
– (4) Strip and crimp black to motor side violet wire
– (5) Strip and crimp white to motor side black wire
– (6) Strip and crimp blue to controller side black 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 29 and 30 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)

Route heater control harness across upper bulkhead, down under battery and coolant recovery reservoir and forward to the heater installation site as shown. Do not secure at this time, harness will be secured along with fuel line later in the installation.

– (1) Heater control harness
– (2) Coolant recovery reservoir

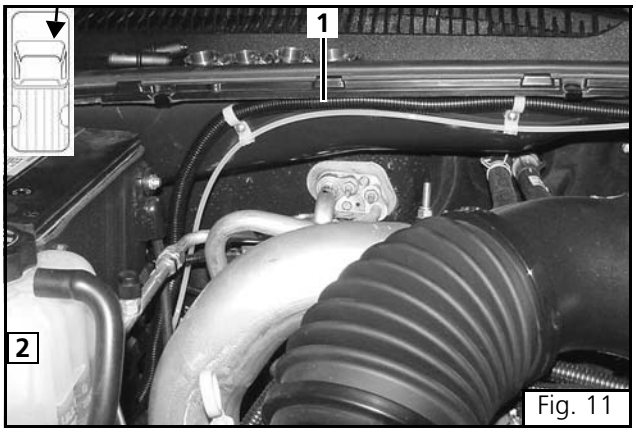


Fig. 11

ATTENTION
Drop fuel pump harness down left (driver) side of bulkhead to underside of vehicle.
Harness will be routed from underside later in the installation.

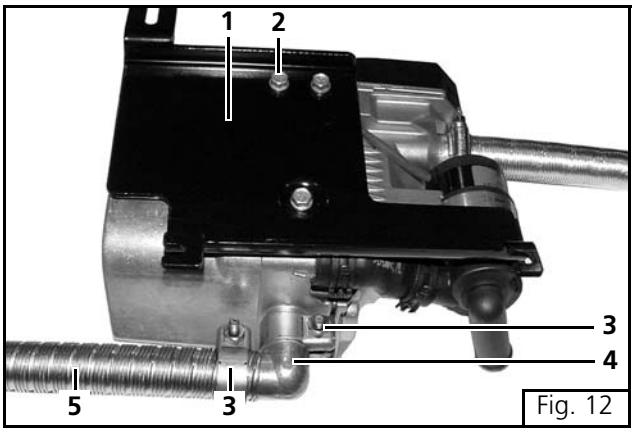


Fig. 12

Heater Preparation

ATTENTION
Observe torque specifications.

Pre-cut exhaust tube to 45.72 cm (18 inches) before installation.

Assemble heater before installing as shown in the next series of Figures.

– (1) Mounting plate
– (2) M6 EJOT screw x3. Torque 10 Nm (88.5 lb-in.)
– (3) Exhaust clamp x2. Torque 5 - 5.5 Nm (44 - 49 lb-in.)
– (4) Exhaust elbow
– (5) Exhaust tube (pre-cut to 18 inches)

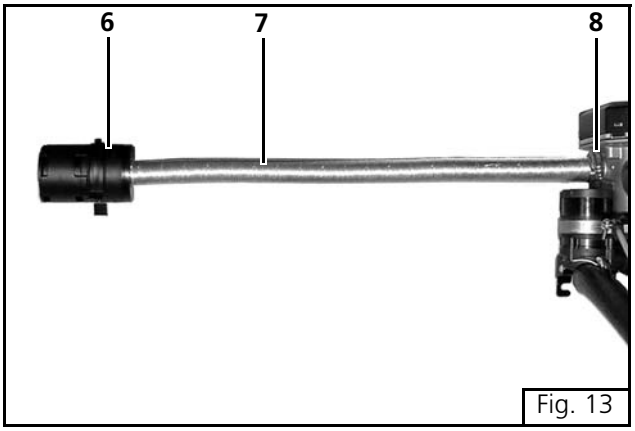


Fig. 13

ATTENTION
Observe torque specifications.

Attach combustion air intake tube with silencer to heater. The combustion air intake port is located directly above the coolant pump

– (6) Air silencer with mounting clamp
– (7) Combustion air tube
– (8) #10 Clamp. Torque 2.0 - 2.5 Nm (18 - 22 lb-in.)

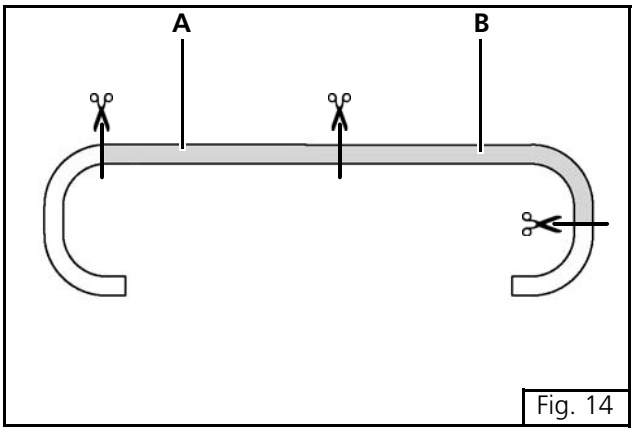


Fig. 14

Cut supplied hose in half to make two hoses.
Trim ends as shown.

Hose A: From engine to coolant pump inlet.

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

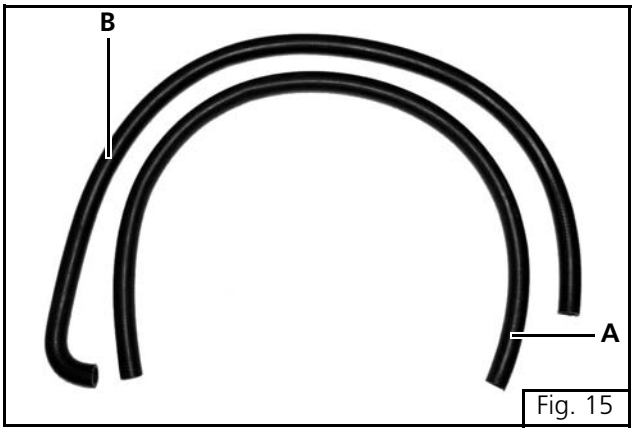


Fig. 15

– (A) Heater inlet (supply) hose
– (B) Heater outlet (return) hose with 90 degree turn

ATTENTION
Observe torque specifications.

Connect coolant hoses and fuel line to heater as shown.

– (1) Heater outlet "B" hose with 90 degree turn

– (2) Heater inlet "A" hose

– (3) Hose clamps x2
Torque 2.0 - 2.5 Nm (18 - 22 lb-in.)

– (4) Mecanyl fuel line

– (5) Fuel line clamps x2
Torque 1.0 - 1.4 Nm (8.8 - 12.4 lb-in.)

– (6) 90 degree fuel line coupler

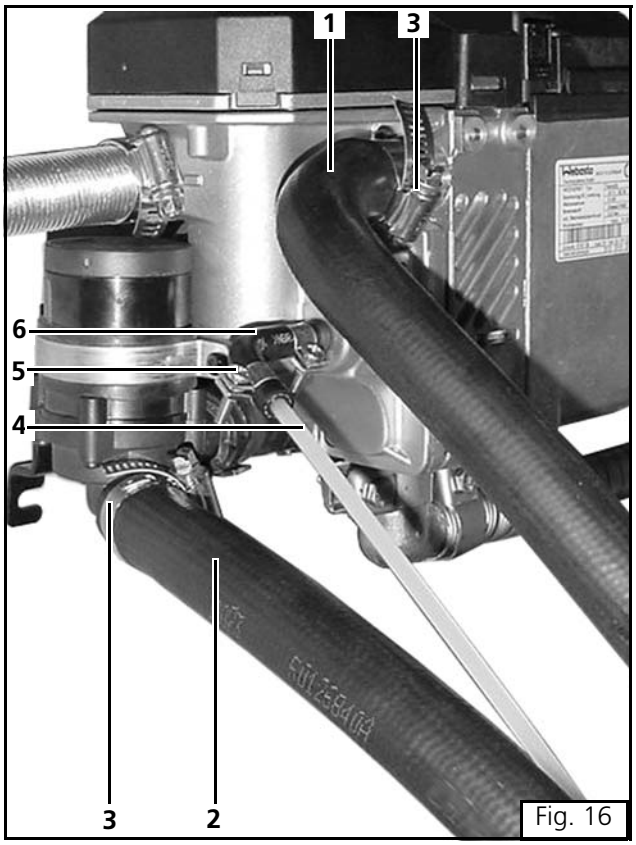


Fig. 16

Heater Installation Site Preparation

ATTENTION
Before the heater can be installed, a horn must be relocated.

– (7) Horn and bracket (air cleaner removed)

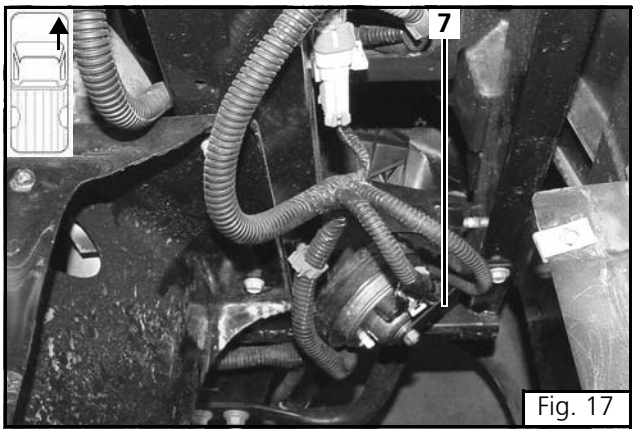


Fig. 17

– Figure 18, horn and bracket before modification

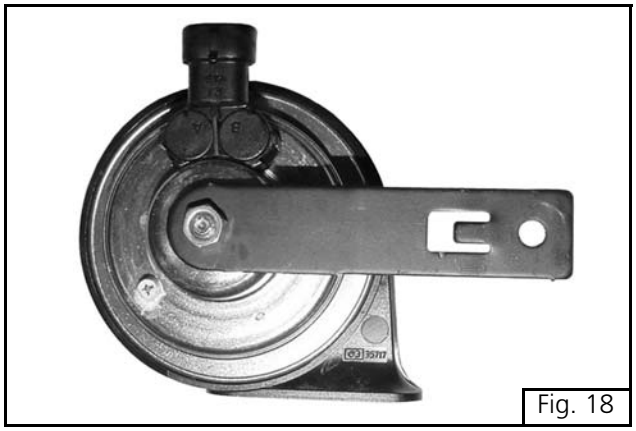


Fig. 18

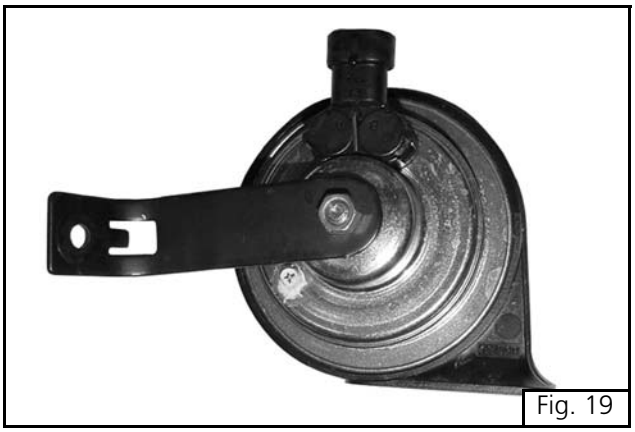


Fig. 19

Relocate bracket 180 degrees and bend end 90 degrees as shown. Reinstall horn so that it clears the heater installation site.

– Figure 19, horn and bracket after modification

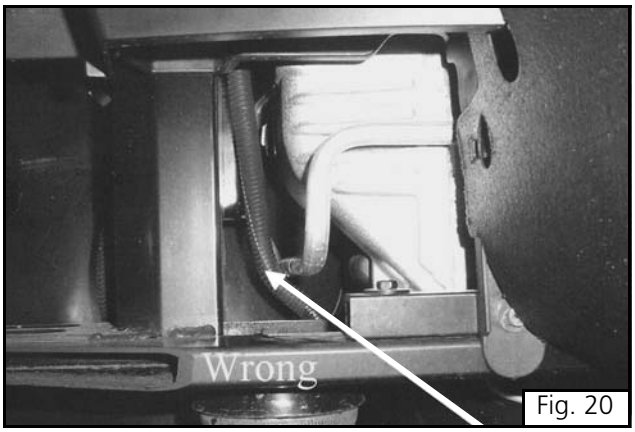


Fig. 20

CAUTION
TO AVOID WIRING DAMAGE FROM HOT EXHAUST TUBE, PLEASE READ!
On some vehicles it may be necessary to relocate the front right head lamp harness from the outer side of the air conditioning line before installing the heater and routing the exhaust tube.

ATTENTION
Observe Figure 20. If the harness is routed as shown, it will have to be relocated. To reroute the harness, disconnect from the head lamps and route accordingly. Reconnect harness.

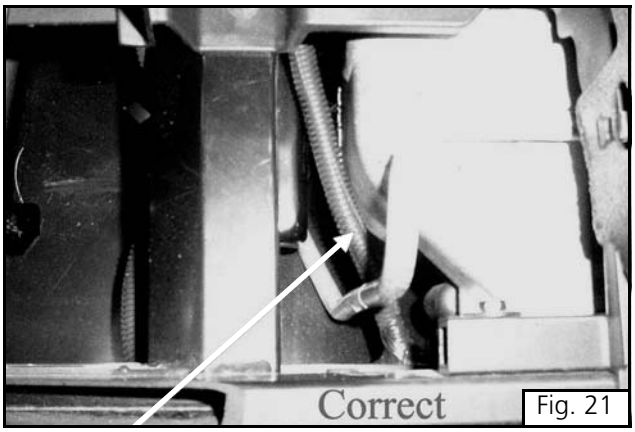


Fig. 21

ATTENTION
Figure 21 showing correct routing of head lamp harness between the AC line and the radiator tank.

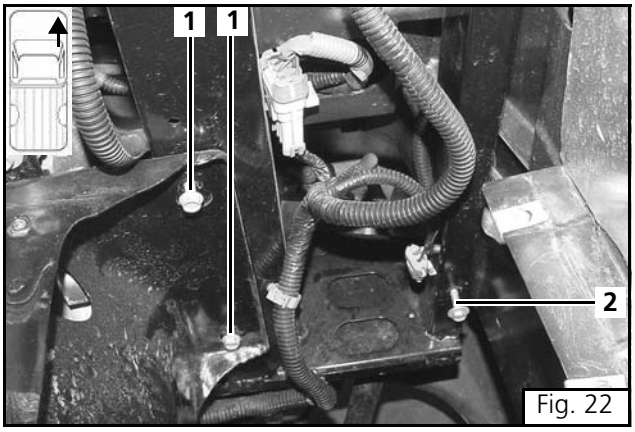


Fig. 22

Use existing mounting screws (item 1) to secure heater bracket.
Use existing horn mounting screw (item 2) to secure heater bracket and relocated horn.

– (1) Existing mounting screws (2 places)
– (2) Existing horn mounting screw

ATTENTION
Heater harness must be connected to heater before placing into position. Place heater close to installation site and connect heater control harness to heater.

– (7) Heater control harness

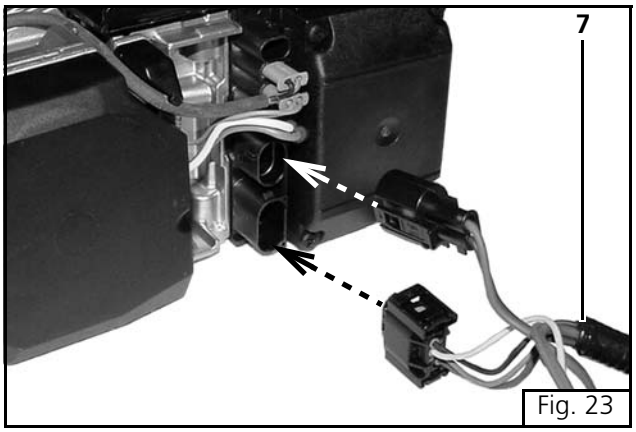


Fig. 23

Heater Installation

– (1) Mounting screws
– (2) Heater bracket
– (3) Heater

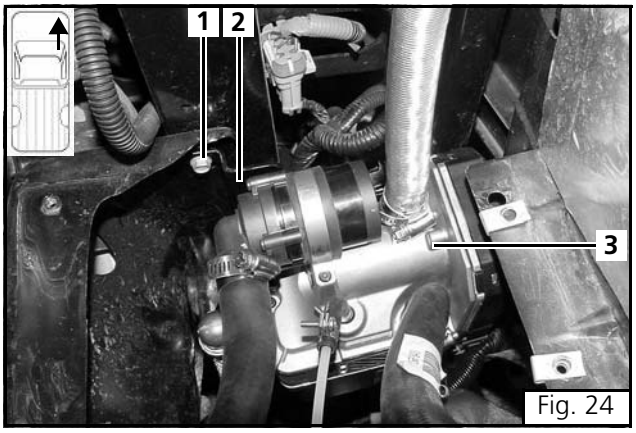


Fig. 24

Install Silencer on upper right corner of radiator support and fender as shown. Use an existing hole on radiator support for silencer mounting clamp.

– (1) Combustion air intake tube
– (2) Silencer
– (3) Silencer mounting clamp

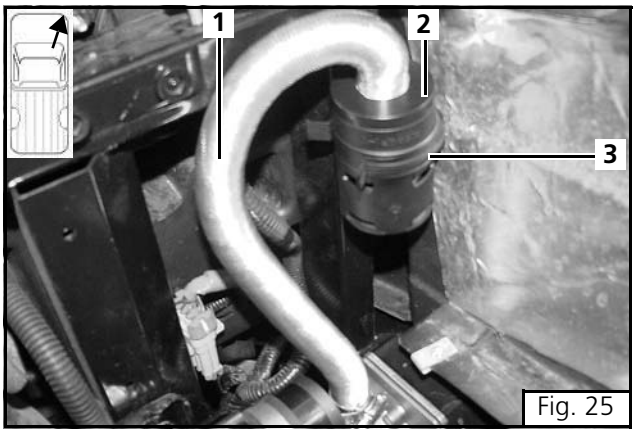


Fig. 25

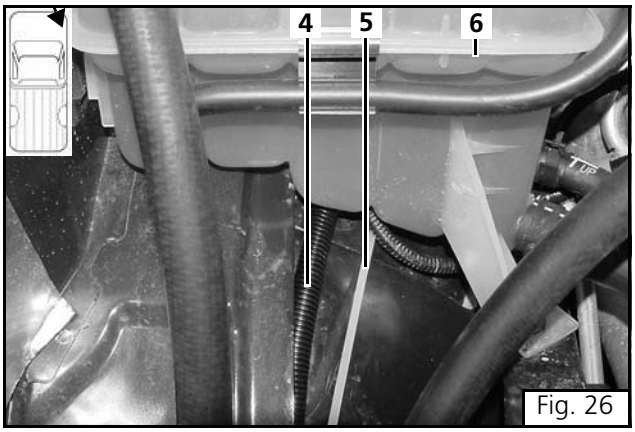


Fig. 26

Route fuel line along same path as heater control harness.

– (4) Heater control harness
– (5) Mecanyl fuel line
– (6) Coolant recovery reservoir

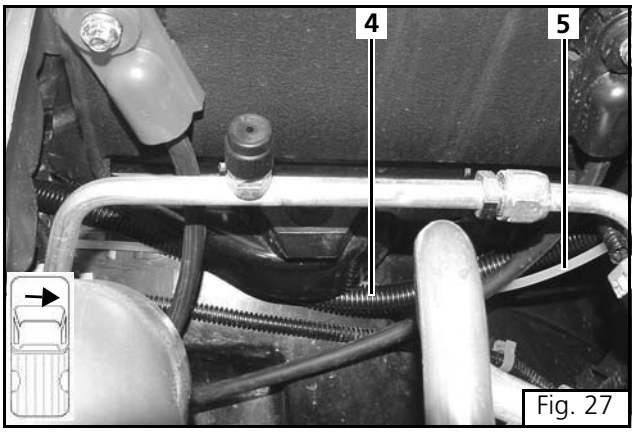


Fig. 27

Route fuel line and harness under battery as shown.

– (4) Heater control harness
– (5) Mecanyl fuel line

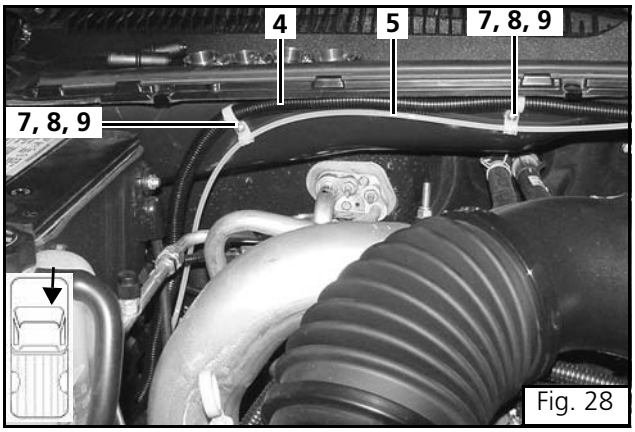


Fig. 28

Secure fuel line and harness with plastic P-clips and self tapping screws where shown.

– (4) Heater control harness
– (5) Mecanyl fuel line
– (7) Nylon P-clip - 8/10mm
– (8) Nylon P-clip - 5/8" ID.
– (9) Pan head screw - #10x1" self drilling/tapping

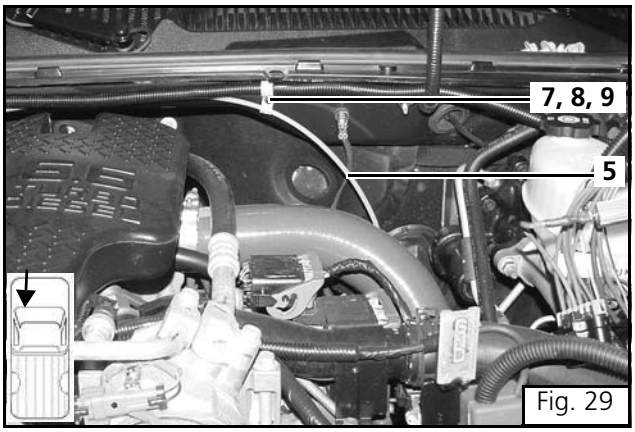


Fig. 29

– (5) Mecanyl fuel line
– (7) Nylon P-clip - 8/10mm
– (8) Nylon P-clip - 5/8" ID.
– (9) Pan head screw - #10x1" self drilling/tapping

ATTENTION
Drop fuel line down left rear side of engine and vehicle fuel lines. Routing and securing will continue from underside of vehicle later in the installation.

Route coolant hoses rearward along fuel line and heater harness. Bring hoses up from right rear area of engine.

– (1) Heater outlet hose
– (2) Heater (coolant pump) inlet hose

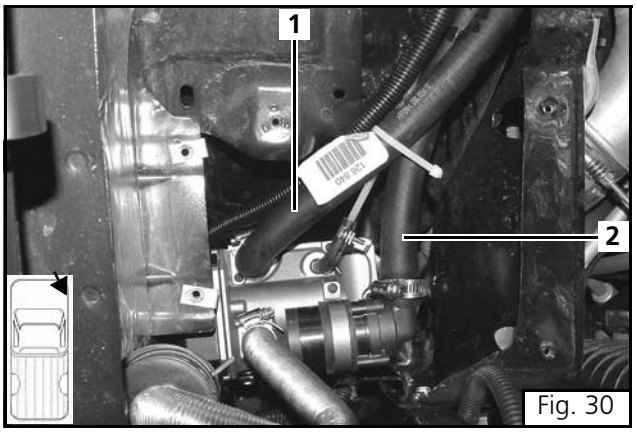


Fig. 30

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 31.

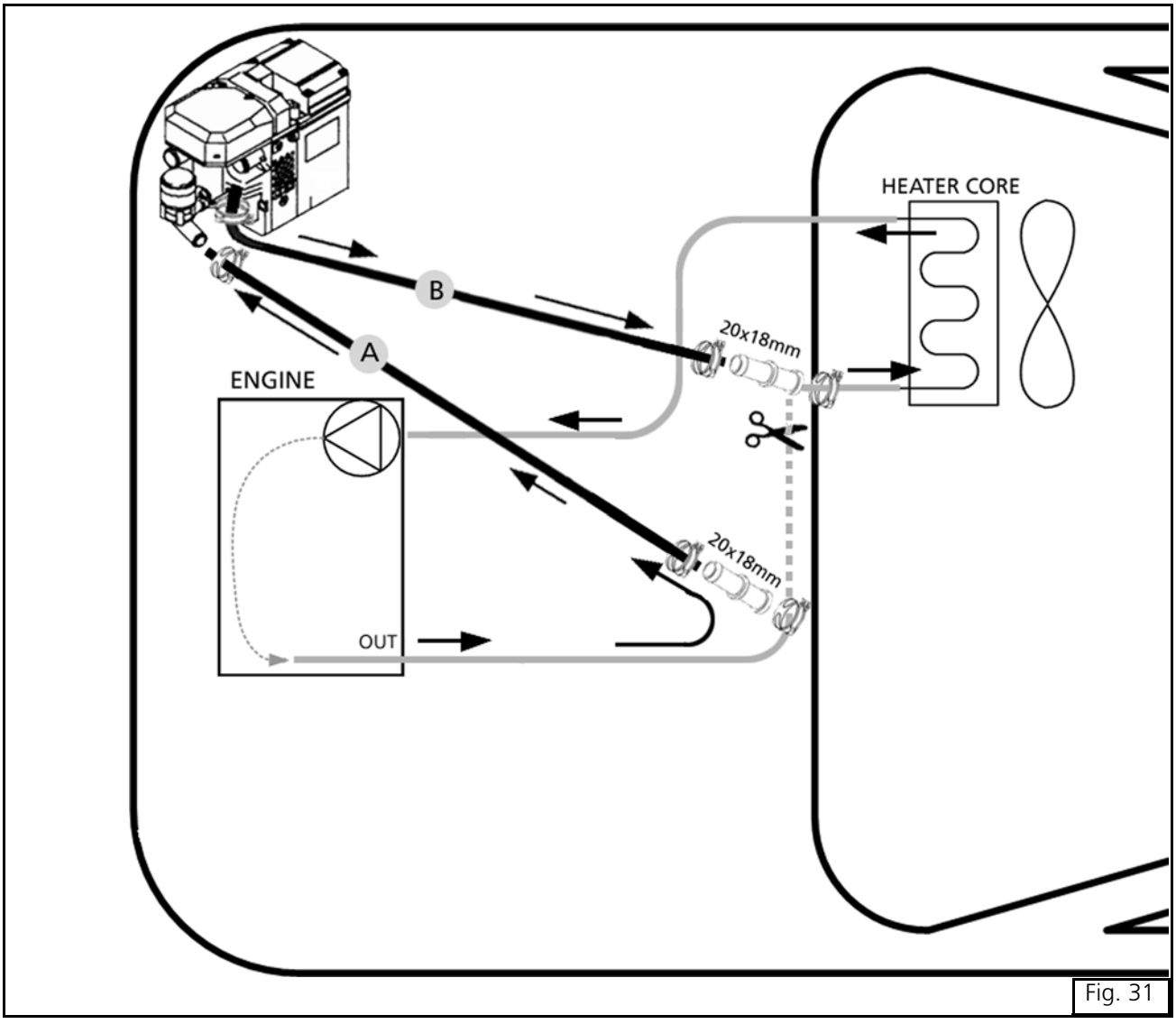


Fig. 31

Coolant flow and connection detail:

Hose A: From engine to Webasto coolant pump inlet.

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

NOTE:

Also see the plumbing schematic, page 31, of this manual for a general outline of the coolant circuit arrangement.

ATTENTION
Confirm supply and return lines to vehicle heater core before cutting any coolant lines. Once confirmed, cut supply line at point close to heater core leaving sufficient hose for connections.

– (1) Webasto coolant hose returning from heater outlet to vehicle heater core inlet (hose "B")
– (2) Webasto coolant hose leading from engine to heater circulation pump inlet (hose "A")

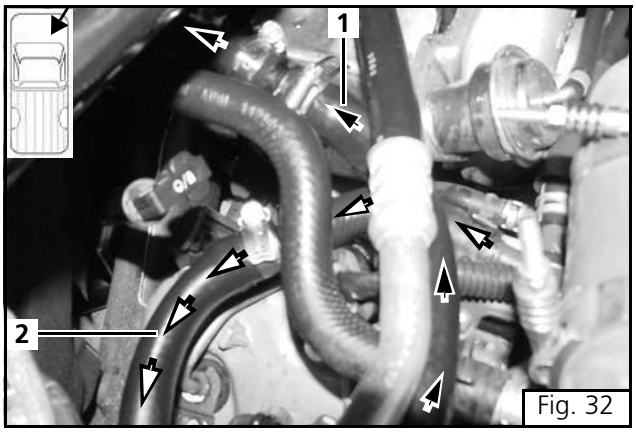


Fig. 32

ATTENTION
Secure coolant hoses to available components with nylon cable ties. Keep hoses away from hot exhaust and turbo components.

Exhaust System Installation

ATTENTION
Keep exhaust away from heat sensitive vehicle components.

NOTE:
Viewed with front bumper removed for clarity.

– (1) Exhaust tube
– (2) Front right radiator support structure

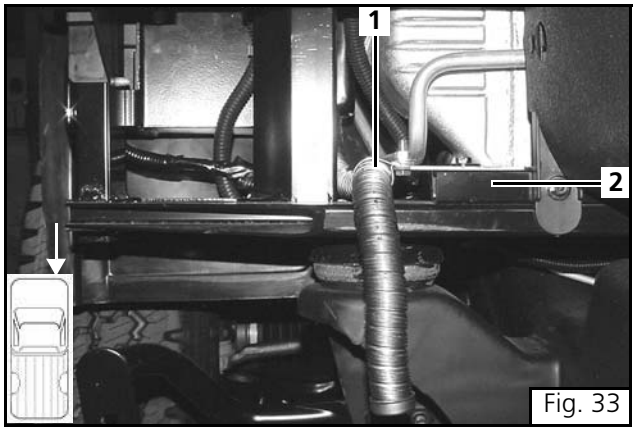


Fig. 33

ATTENTION
Ensure outlet end of exhaust tube is directed downward and slightly rearward 10 degrees.

– (1) Exhaust tube
– (2) Front right radiator support structure
– (3) Hex head bolt - M6x20, Flat washer, Nut - M6, P-clip - 24-26 ID.
– (4) Perforated Strip
– (5) Existing vehicle bolt

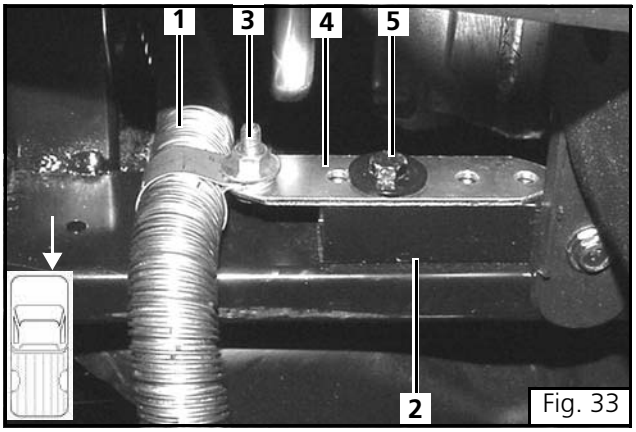


Fig. 33

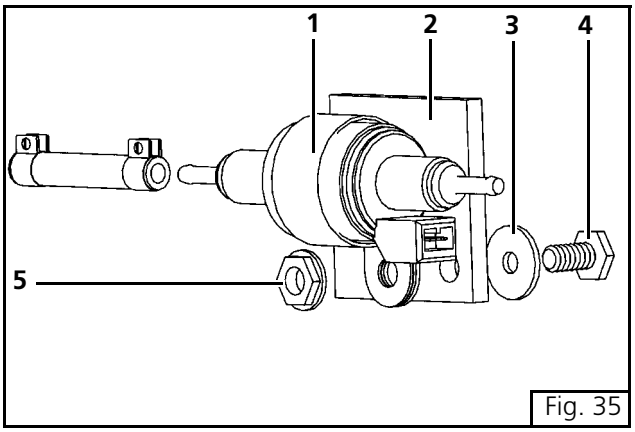


Fig. 35

Integration into the Fuel System

Fuel Pump Installation

The fuel pump is mounted horizontally along the left inside frame rail, ahead of the fuel cooler, using an existing hole in the frame.

Legend for Figure 34

1 P-clip (Fuel pump retaining)
2 Vehicle frame rail (left)
3 Fender Washer - M6
4 Cap screw - M6x20
5 Flanged nut - M6

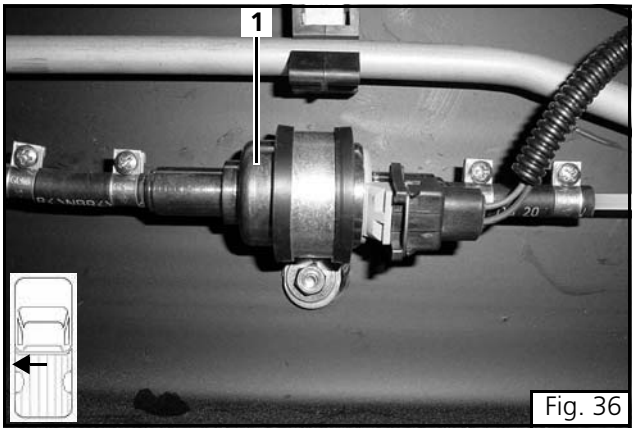


Fig. 36

(1) Fuel pump - installed

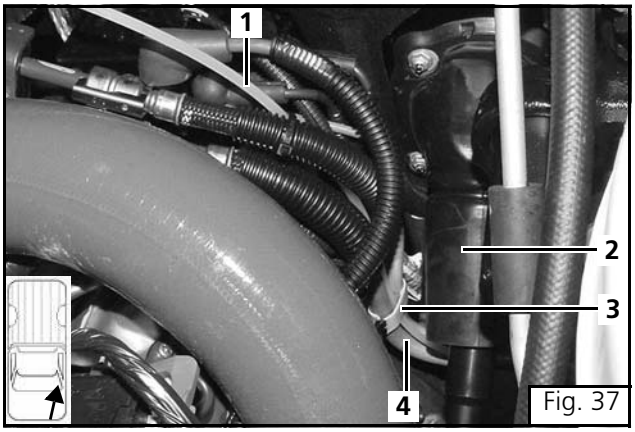


Fig. 37

Fuel Line Routing

ATTENTION

Avoid areas where fuel line can be damaged by sharp surfaces or hot components.

From underside of the vehicle, route the fuel line and fuel pump electrical harness rearward along the existing vehicle fuel lines.

– (1) Mecanyl fuel line (heater)
– (2) Steering shaft
– (3) Existing vehicle fuel line clip
– (4) Existing vehicle fuel lines

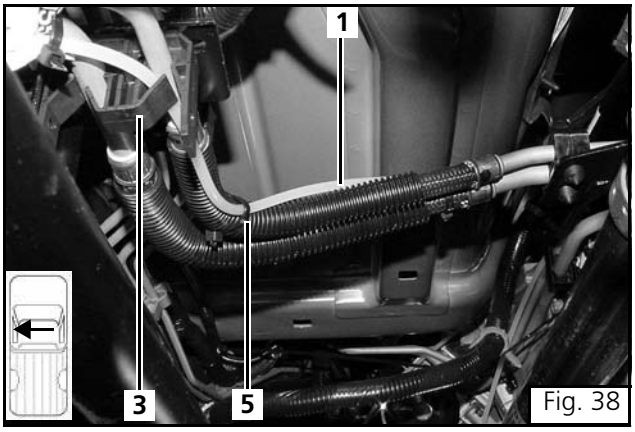


Fig. 38

Continue routing fuel line and fuel pump electrical harness along vehicle fuel lines.
Tie securely with nylon cable ties.

– (1) Mecanyl fuel line (heater)
– (3) Existing vehicle fuel line clip
– (5) Nylon cable tie

– (1) Mecanyl fuel line (heater)
– (3) Existing vehicle fuel line clip
– (5) Nylon cable tie
– (6) Electrical harness - fuel pump

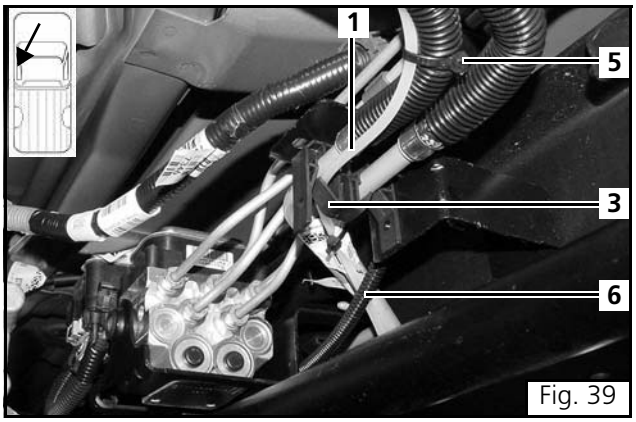


Fig. 39

– (1) Mecanyl fuel line (heater)
– (3) Existing vehicle fuel line clip
– (5) Nylon cable tie
– (6) Electrical harness - fuel pump

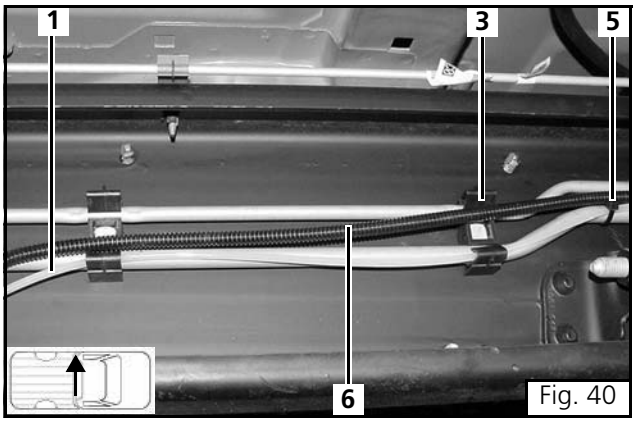


Fig. 40

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.

Cut fuel line and connect to fuel pump. See Figure 42 for correct fuel line connections.

– (1) Mecanyl fuel line (heater)
– (6) Electrical harness - fuel pump
– (7) Fuel line clamps
Torque 1.0 - 1.4 Nm (8.8 - 12.4 lb-in.)
– (8) Fuel line coupler

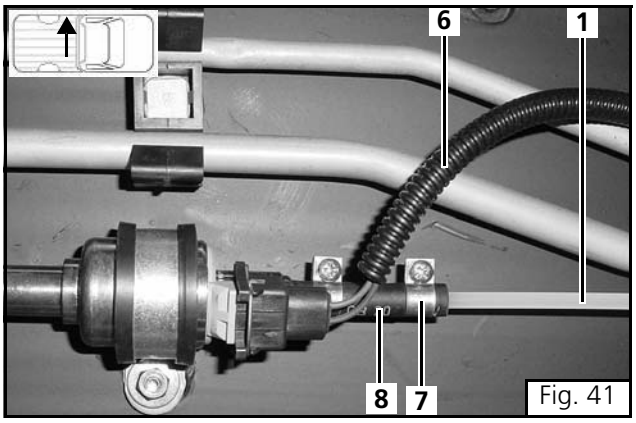


Fig. 41

Assemble electrical harness connector and connect harness to pump.

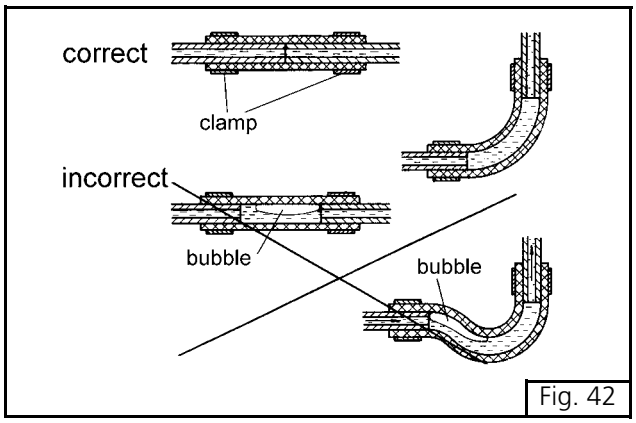


Fig. 42

Standpipe Installation - 2000 Through 2003 Model Years

CAUTION
For reasons of safety due to the weight of fuel and the tank, it is recommended that there be no more than 1/4 tank fuel present. If fuel quantity is greater than 1/4 of capacity, make provisions to reduce quantity of fuel or consider removal of pick-up box to gain access to fuel sender location if feasible.

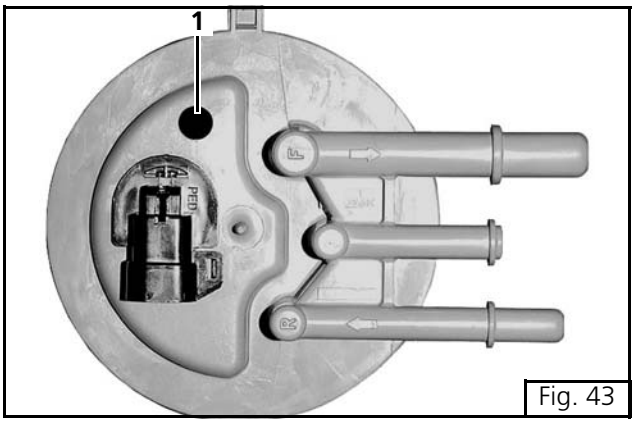


Fig. 43

ATTENTION
Using an appropriate jack and safety stands, lower the fuel tank and remove the fuel sender unit according to the vehicle manufacturers servicing instructions.

– (1) Drill hole 8.0 mm (5/16 in.)

ATTENTION
De-burr both sides of hole after drilling.

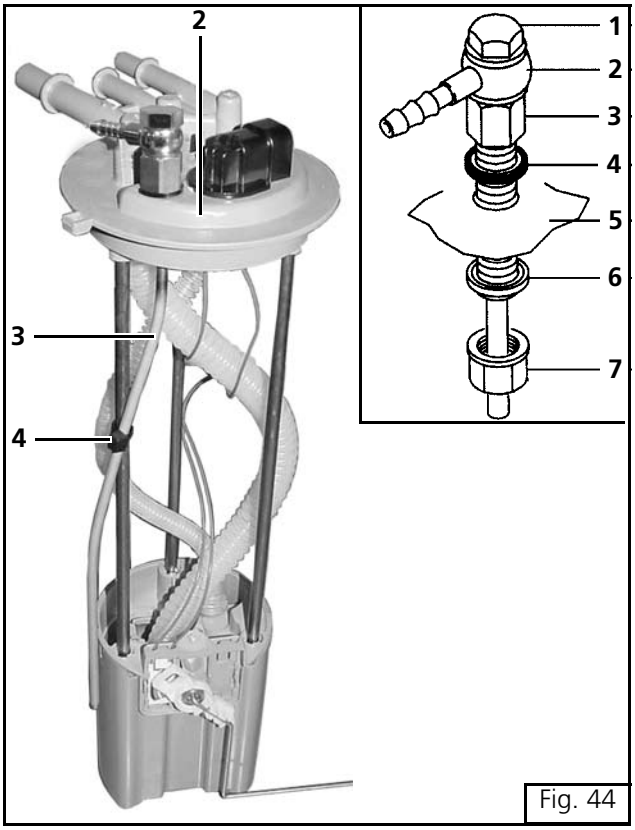


Fig. 44

Legend for Inset Image

1 Banjo Bolt - Torque 8.5-9.5 Nm (75-84 lb-in.)
2 Banjo Fitting
3 Standpipe
4 Upper Sealing Washer (Black)
5 Fuel Tank
6 Lower Sealing Washer (Brass)
7 Lock Nut - Torque 8.5-9.5 Nm (75-84 lb-in.)

Cut standpipe to length. The standpipe tube should terminate approximately 38 mm (1.5 in.) off bottom of tank when installed.
Bend standpipe as shown.

ATTENTION
Ensure standpipe does not interfere with the float arm assembly.

Install standpipe, see inset image for item sequence.

– (2) Fuel sender unit
– (3) Standpipe
– (4) Nylon cable tie

– (5) M8 locking nut
Torque to 8.5-9.5 Nm (75-84 lb-in.)

– (6) Holding fixture (not required)

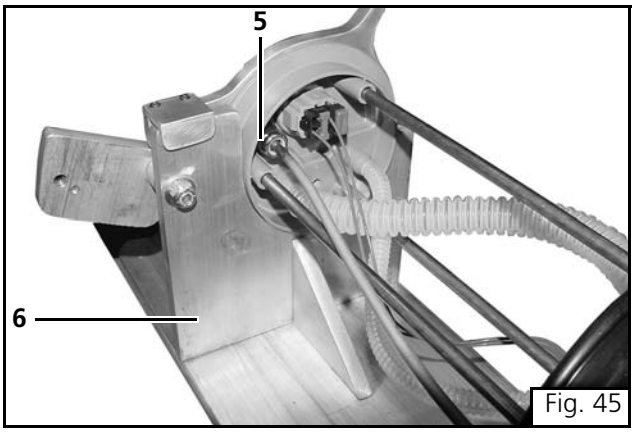


Fig. 45

Re-install fuel sender assembly according to the vehicle manufacturers servicing instructions.

Connect fuel line to fuel sender. Route fuel line forward along existing vehicle fuel lines. Install fuel tank according to vehicle manufacturers servicing instructions.

– (1)Fuel standpipe
– (2) Fuel line clamps
Torque 1.0-1.4 Nm (8.8-12.4 lb-in.)

– (3) Fuel line coupler
– (4) Mecanyl fuel line

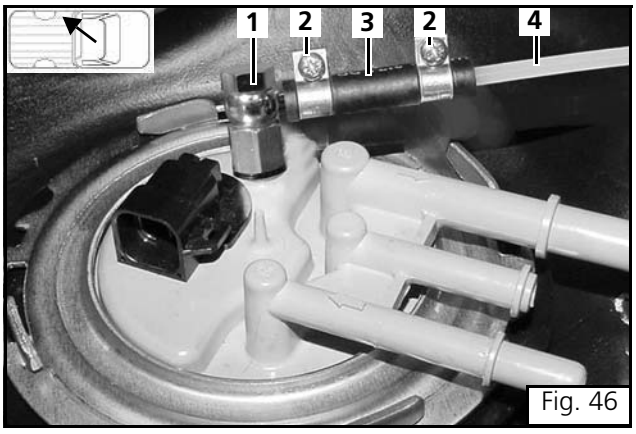


Fig. 46

Route Mecanyl fuel line along existing vehicle fuel lines as shown. Secure fuel line to existing vehicle fuel lines with nylon cable ties as shown.

– (4) Mecanyl fuel line
– (5) Nylon cable tie
– (6) Existing vehicle fuel lines

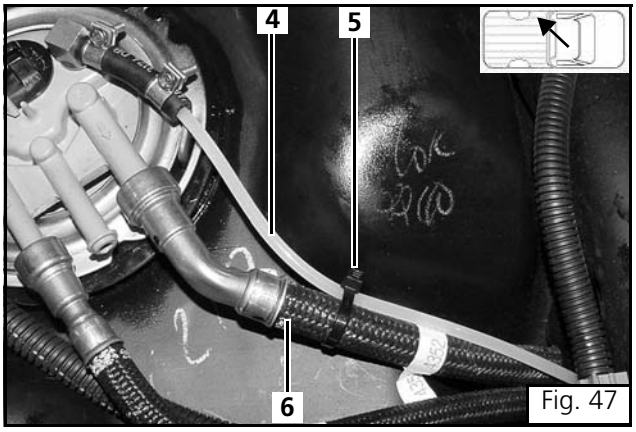


Fig. 47

Proceed to page 25 for fuel line routing and connection to fuel pump beginning at Figure 57.

Standpipe Installation - 2004 - 2006 Model Year

CAUTION
For reasons of safety due to the weight of fuel and the tank, it is recommended that there be no more than 1/4 tank fuel present. If fuel quantity is greater than 1/4 of capacity, make provisions to reduce quantity of fuel or consider removal of pick-up box to gain access to fuel sender location if feasible.

ATTENTION
Using an appropriate jack and safety stands, lower the fuel tank and remove the fuel sender unit according to the vehicle manufacturers servicing instructions.

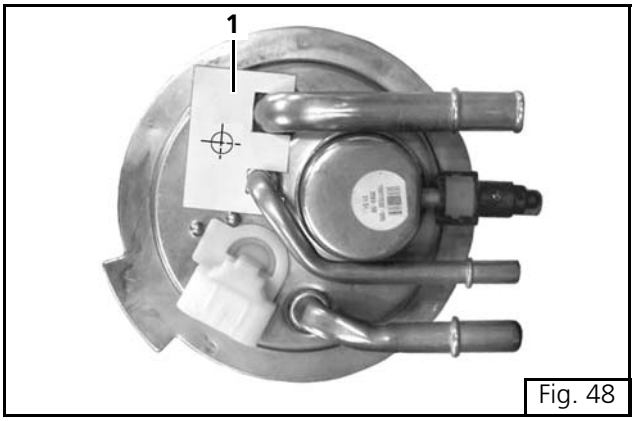


Fig. 48

A drilling template is provided on last page of this manual. Carefully cut out the template and place on sender unit as shown.

Drill a 1/8 in. pilot hole through the sender where indicated. The pilot hole must be centered within the surrounding plastic material when viewed from underside. See Figure 50 before drilling.

– (1) Drilling template

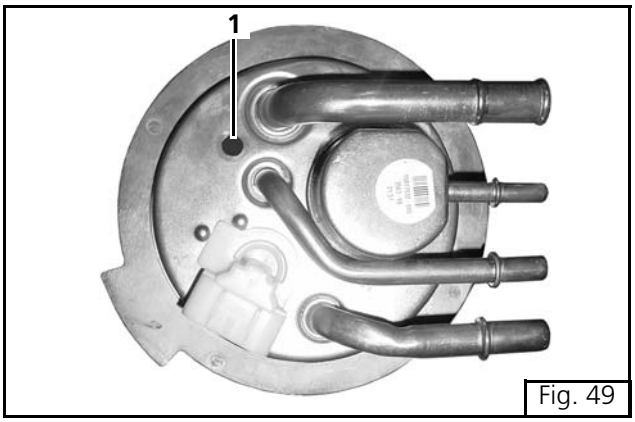


Fig. 49

– (1) Enlarge hole to 8.0 mm (5/16 in.)

ATTENTION
De-burr both sides of hole after drilling.

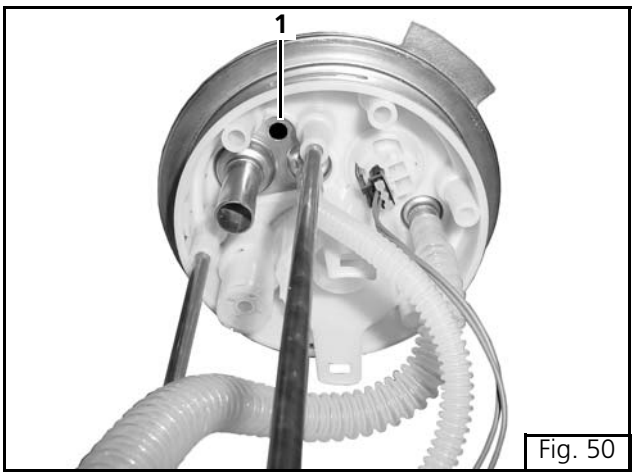


Fig. 50

– (1) Hole viewed from underside

ATTENTION
Note that hole is centered within the surrounding plastic material.

Cut standpipe to length. The standpipe tube should terminate approximately 38 mm (1.5 in.) off bottom of tank when installed. Refer to figure 52 for length. Remove any burrs from inside cut end of tube. Bend standpipe as shown.

– (1) Standpipe

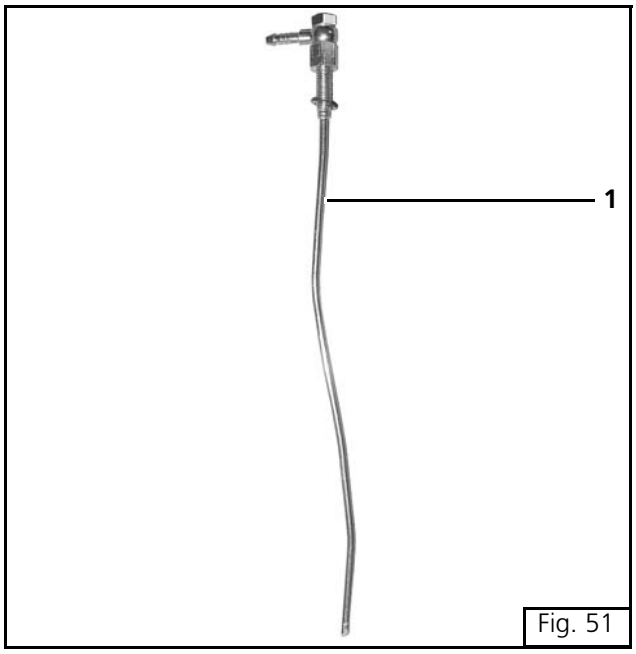


Fig. 51

The standpipe tube should terminate approximately 38 mm (1.5 in.) off bottom of tank when installed. Refer to figure 52 for length.

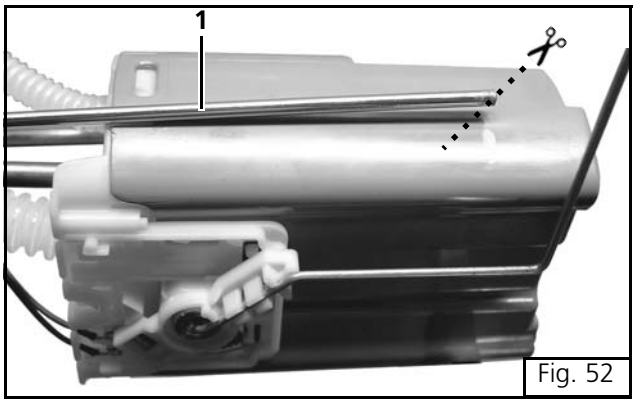


Fig. 52

ATTENTION
Ensure standpipe does not interfere with the float arm assembly.

Install standpipe, see Figure 54 for item sequence.

– (2) Fuel sender unit
– (3) Standpipe
– (4) Nylon cable tie

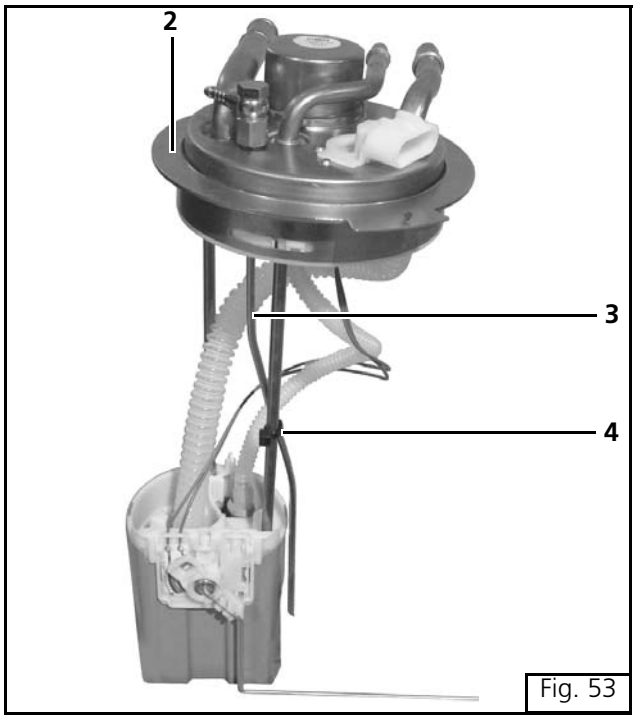


Fig. 53

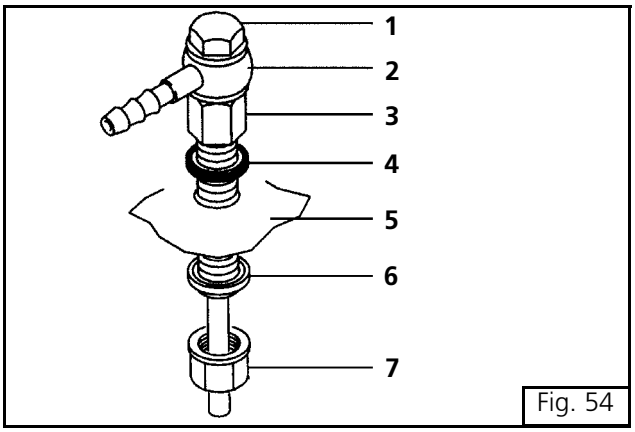


Fig. 54

Legend for Figure 54

1 Banjo Bolt - Torque 8.5-9.5 Nm (75-84 lb-in.)
2 Banjo Fitting
3 Standpipe
4 Upper Sealing Washer (Black)
5 Fuel Tank
6 Lower Sealing Washer (Brass)
7 Lock Nut - Torque 8.5-9.5 Nm (75-84 lb-in.)

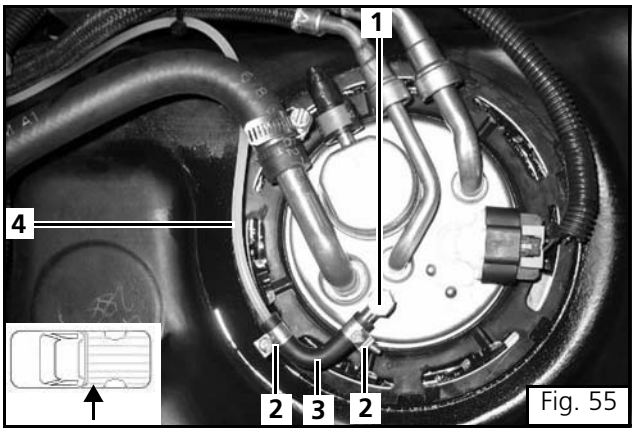


Fig. 55

Re-install fuel sender assembly according to the vehicle manufacturers servicing instructions.

Connect fuel line to fuel sender. Route fuel line forward along existing vehicle fuel lines. Install fuel tank and lines according to vehicle manufacturers servicing instructions.

– (1)Fuel standpipe
– (2) Fuel line clamps - torque 1.0-1.4 Nm (8.8-12.4 lb-in.)
– (3) Fuel line coupler
– (4) Mecanyl fuel line

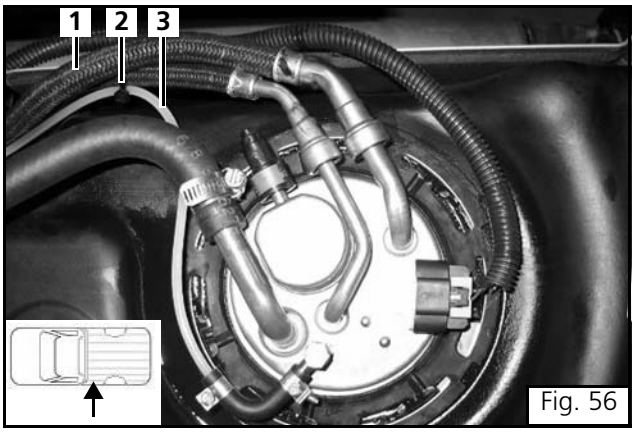


Fig. 56

Route Mecanyl fuel line along existing vehicle fuel lines as shown. Secure fuel line to existing vehicle fuel lines with nylon cable ties as shown.

– (1) Existing vehicle fuel lines
– (2) Nylon cable tie
– (3) Mecanyl fuel line

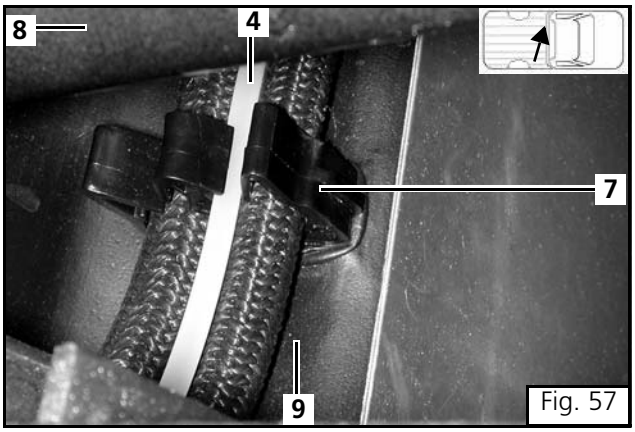


Fig. 57

Fuel Line Routing from Sender to Pump

Continue routing Mecanyl fuel line along vehicle fuel lines as shown.

– (4) Mecanyl fuel line
– (7) Existing vehicle fuel line clamp
– (8) Back of cab
– (9) Top of left frame rail

Continue routing Mecanyl fuel line along vehicle fuel lines as shown.

– (4) Mecanyl fuel line
– (5) Nylon cable tie
– (6) Existing vehicle fuel lines

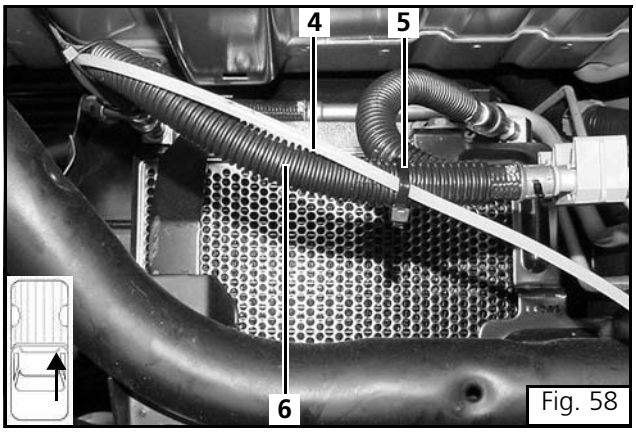


Fig. 58

ATTENTION
Always cut Mecanyl fuel line with a sharp razor knife or razor edged cutter. DO NOT cut with side cutters, scissors or similar tools as doing so will cause a restriction inside the fuel line.

Cut fuel line and connect to fuel pump.

– (4) Mecanyl fuel line
– (10) Fuel pump

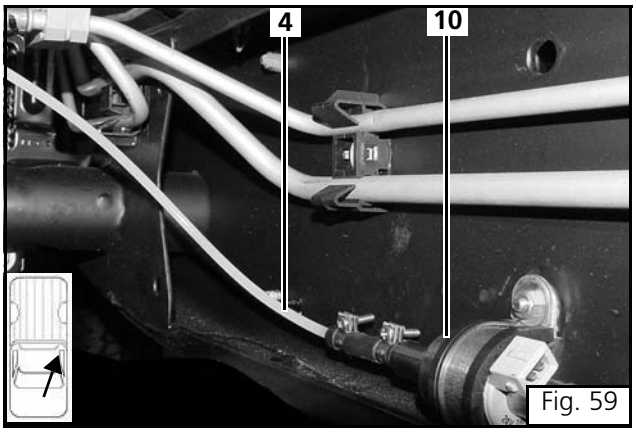


Fig. 59

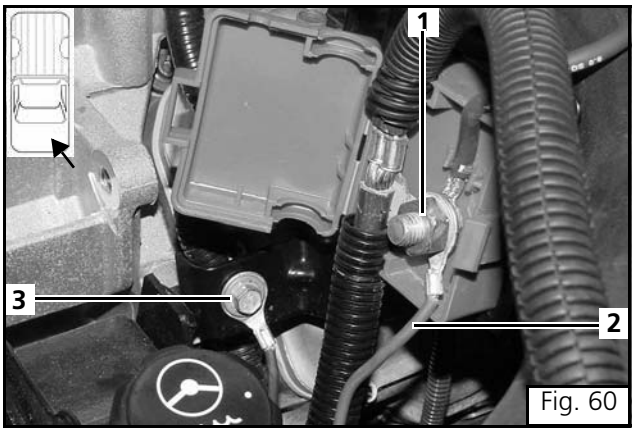


Fig. 60

Power Connection

Connect red power lead to existing auxiliary power point underhood. Connect brown ground lead as shown. Reconnect battery ground cable.

– (1) Vehicle auxiliary power point
– (2) Webasto power lead
– (3) Webasto ground lead

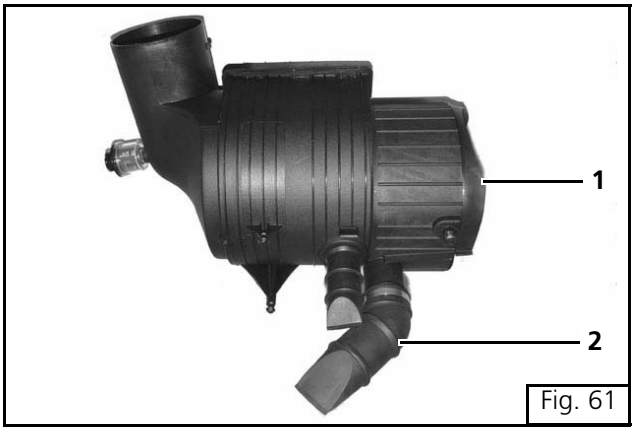


Fig. 61

Air Cleaner Housing Modification (06 MY)

ATTENTION

The Large drain tube coming from the bottom of the air cleaner housing must be re-positioned to prevent interference with the Webasto heater.

Rotate the large drain tube coming from the bottom of the air cleaner housing 90° as shown in Figure 61.

– (1) Air Cleaner Housing Assembly
– (2) Large Drain Tube

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.
2. Set interior heater control to maximum heat position (hot) 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 Blue*Heat* 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:

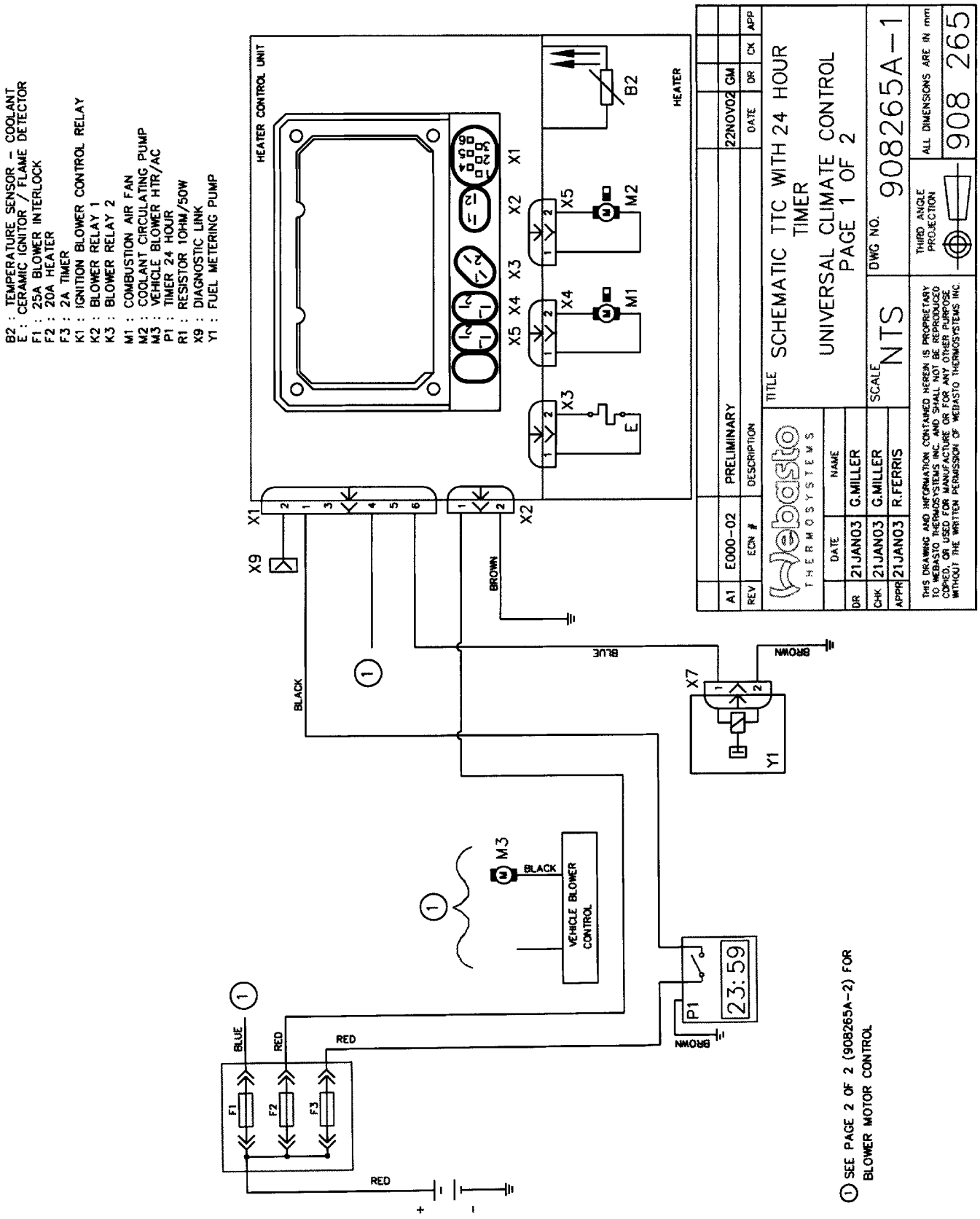
1 Ensure timer or switch is in the "OFF" position. Turn timer or switch to the "On" position. Remove main fuse F2 (20 Amp), reinsert after 5 seconds.
2 Cycle timer or switch off and then back on once more. Remove fuse F2 once again and reinsert after 5 seconds. Heater should attempt to start after inserting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

ATTENTION

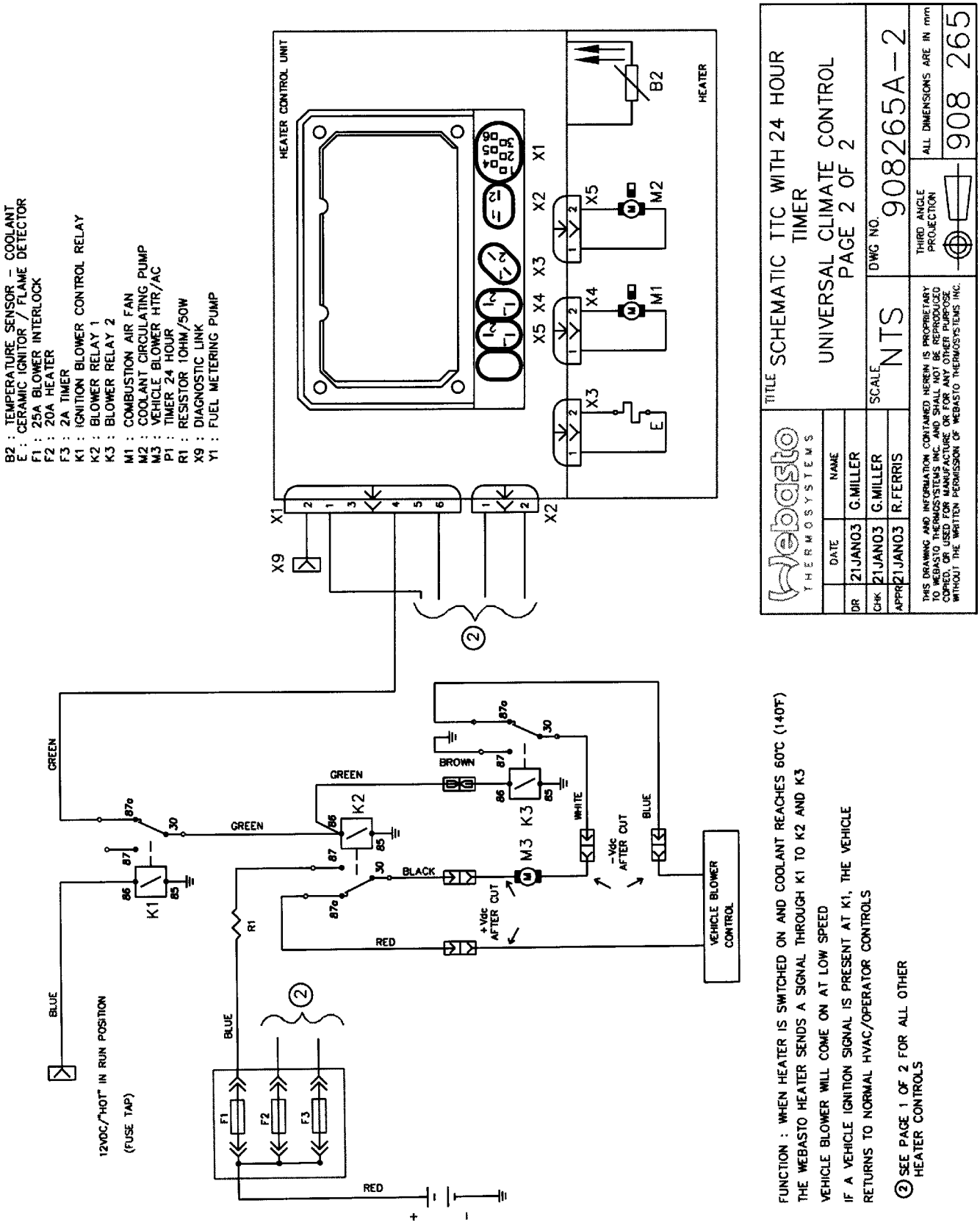
– The engine coolant must be below 86 °F (30 °C) before the Webasto heater will attempt to start.
– Should the heater fail to start or operate correctly, contact your Webasto technical representative at:

1-800-555-4518

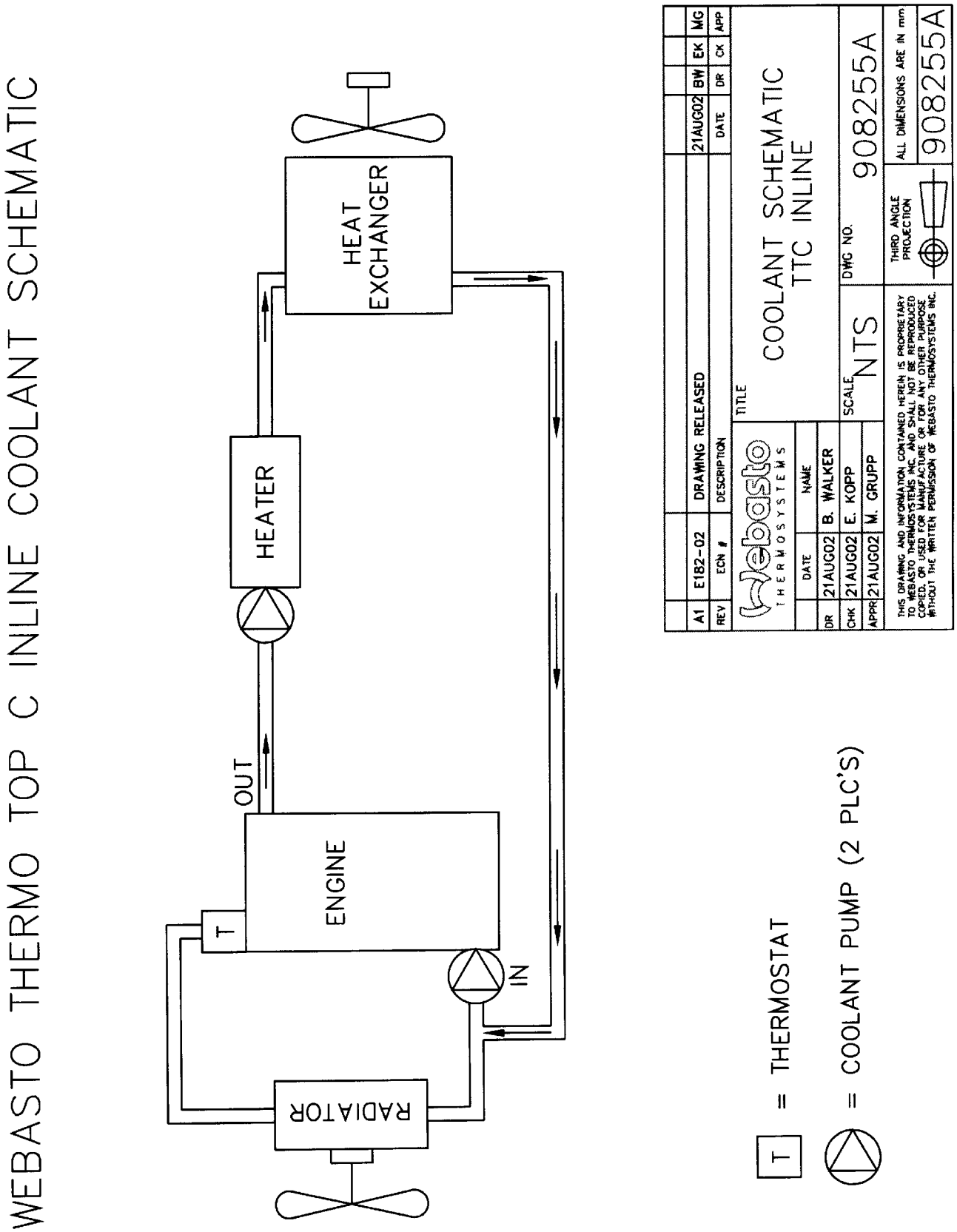
Electrical Harness Schematic - Part 1, Heater Control



Electrical Harness Schematic - Part 2, HVAC Blower Control



Heater Plumbing Schematic - Inline Method



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Please rate the overall usefulness of the documentation.	1	2	3	4	5
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What could be added or clarified?_____

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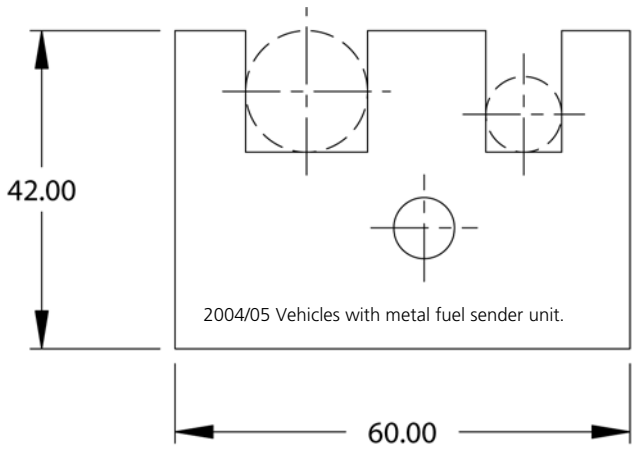
Sender Unit / Standpipe Template for Model Year 2004/05 Vehicles

Cut out along solid outline of template.



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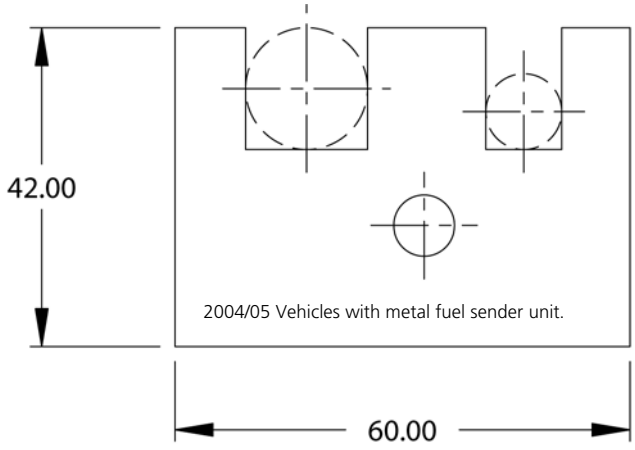

(Spare template)