

Heater

Warranty Manual

Version 1.2.2

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Purpose

The purpose of this manual is to provide the distributor with specific “how to proceed” instructions for product defects within the heaters limited warranty period. This manual provides the policies and procedures to follow for heater warranty claims and reimbursement. Use the appendices to reference specific documentation needed to properly complete a warranty claim.

External Distribution

This manual is available via the Webasto Product North America Inc. technical website. <http://www.techwebasto.com>. A distributor or product owner may request a copy of this document at any time using the following means of contact.

Webasto Product North America Inc. (herein after referred to as Webasto)

Phone:	(800) 860-7866
Email:	info@webasto-us.com
Mail:	Webasto Product N.A. Inc. ATTN: Technical Support 15083 North Rd. Fenton, MI 48430

Policies

Warranty Policy Overview

Webasto warrants heater products manufactured or supplied by Webasto Product, subject to qualifications indicated. Webasto warrants these products for the period set forth below, to be free from defects in workmanship and material, provided such products are installed, operated, and maintained in accordance with Webasto heater specific written instructions.

THIS WARRANTY IS NON-TRANSFERRIBLE. IMPLIED WARRANTIES INCLUDING THAT OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WARRANTY. THE LIMITATION ON THE DURATION OF IMPLIED WARRANTIES MAY VARY IN VARIOUS STATES OF THE UNITED STATES AND AMONG CANADIAN PROVINCES.

Warranty Period

Webasto warrants their heaters and heater kits against defects in material and workmanship for two (2) years or 2000 operating hours, effective at the time of installation or vehicle registration date for Original Equipment installations (OE). This warranty period may not exceed three (3) years from the original date of sale by Webasto. This warranty period may be superseded by a contractual agreement.

Warranty coverage for marine and off-road applications containing DBW series heaters and the CSL Cargo Heaters are limited to (2) years or 3,000 operating hours. All other models are limited to 2,000 maximum operating hours.

Replacement parts are covered for six (6) months or the remainder of the original warranty period, whichever is longer. Replacement heaters are considered a "Replacement Part."

IMPORTANT NOTE:

If the product registration card supplied with the product is not received within 30 days of the installation it can directly affect the warranty duration. Please see the Warranty Registration Section on page 7 for further information.

What IS covered by the Warranty

Webasto covers the following items and procedures:

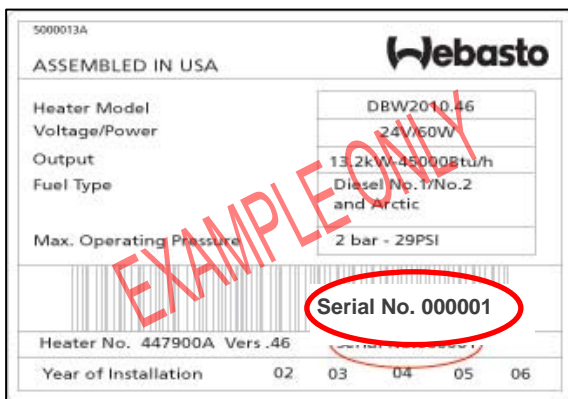
- Testing & Diagnosis as described in the flat rate labor time guide on page 17.
- Travel time is ONLY covered for Marine heater claims. Proof of purchase must be provided from a Webasto authorized marine product distributor to validate the claim.
- Repair of heaters (per documented repairs procedures) and components as described in the Time Allowance Guide on page 18. **The only exception is the removal and replacement of the Thermo Top C / TSL.**
- All heater accessory parts accompanied by proof of purchase are eligible for a 2 year warranty.

What is NOT covered by the Warranty

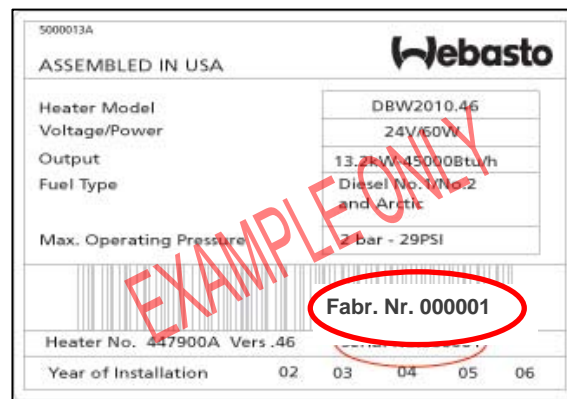
Webasto specifically excludes and limits warranty from the following:

- Normal wear of service parts
- Removal and replacement of heater (with the exception of the Thermo Top C).
- Damage to product in transit. All claims must be filed with carrier.
- Improper installation, not in accordance with, supplied installation instructions or approved OEM applications.
- Deterioration due to normal wear, corrosion, abuse, damage, accident, improper storage or operation.
- Modification of product by alteration, use of non-genuine parts or repaired by unauthorized personnel.
- Heater is past the warranty period
- Diagnosis time for heater inter-lock / lock-out mode reset.
- Filters, fuel nozzles, fuel line, fuel line couplers, clamps (fuel / coolant), air ducting, coolant hoses, bulbs overheat fuses, intake and exhaust tubing, coolant (Including additives)
- Opened electrical parts (not sealed in original box)
- Damage caused by improper fuel
 - Please reference the product related installation manual for proper fuel usage.

Heater Identification Plate



OR



Owner Responsibilities

The intent of the Webasto warranty is to protect the original product owner from product defects and provide free repair and replacement of defective parts in the manner provided herein. During the warranty period the exclusive remedy will be for Webasto, at their discretion, to repair or replace those parts which are demonstrated to be defective in material or workmanship.

While warranty is provided to the "original product owner", it is to be administered and serviced by Webasto Product personnel, or a Webasto Authorized distributor in accordance with the Webasto warranty policy or contractual agreement between Webasto and a second party.

Servicing the heater at the start of each season is recommended. While such maintenance may be performed by any company, Webasto recommends that the vehicle owner use only Webasto authorized distributors. Improper or incorrectly performed maintenance or repair voids the Warranty. Parts including fuel nozzles, filters and overheat fuses are not covered under warranty.

A product registration card is included with the sale of each heater. It is the product owner's responsibility to complete this card and return it to Webasto for registration. A proof of purchase is required for all heaters that are not registered. Refer to page 7 "Warranty Registration" for additional information. An online product registration option is also available at <http://webcentives.perks.com/warranty/productreg.asp>.

This warranty gives the product owner specific legal rights and may also have other rights which vary by State or Province.

Procedures

Warranty Registration:

All Webasto heaters will have a product registration card included in the box. If a product registration card is not received by Webasto within 30 days of installation, the product owner must provide the original proof of purchase or the heater warranty period will roll back to the date the heater was sold to the Webasto authorized distributors and not the date of installation. When the product is properly registered, it ensures the warranty period for the maximum time available. Webasto Distributors have the option of submitting this information on behalf of the product owner prior to delivery by logging into the Webasto Academy (<http://webcentives.perks.com>) ensuring their customers receive a full factory warranty.

Procedure for Performing Warranty Work

As a trained installation center for Webasto, the technician has the proper skills to troubleshoot and repair Webasto heaters and systems. The facility must provide their technicians with all the necessary tools required to properly diagnose heater functions.

Technical publications such as technical manuals, parts manuals, and service bulletins are available via the Webasto technical website (<http://www.techwebasto.com>). Newsletters are periodically sent out which also include informational product updates. It is important to maintain these publications and refer to them when needed for proper diagnosis and repair of Webasto heating products. Product specific tools and testing equipment are available and required for most heater warranty claims (please refer to the Tools and Equipment section). For questions, contact Webasto Technical Support for further assistance. (800) 860-7866

Once the product and installation have been examined and proper repair steps determined, the warranty work must be performed by Webasto Product personnel or a Webasto authorized distributor. Ensure to use the information provided via the above mentioned methods combined with the validated Webasto training and skills to correct the cause of the problem.

Repair Performance

- 1) A check of connectors, fuses, wiring, fuel supply, and battery integrity should be performed prior to conducting any diagnostic test procedure.
- 2) Using the appropriate service and repair manual, the technician should proceed to test and diagnose to isolate defective components on the heater model in question.
- 3) Proceed with component removal and installation.
- 4) Perform post-repair operational testing.

With the exception of the Thermo Top C, replacement and removal of heater, as a means of repair, is not covered.

Any part replaced under warranty must be tested to confirm that it is defective. Parts that should be tested are, but not limited to:

- Glow Pins
- Control Units
- Fuel Metering Pumps
- Temperature, Flame and Overheat Sensors
- Combustion Air Blowers
- Coolant Pumps
- Thermostats and Timers

Claim Submission

Paper Claim Submission

Warranty claim forms (item # 907859) may be ordered through customer service. (800) 860-7866.

1. Complete Webasto Claim Form # 907859. (**FAXED** copies will not be accepted)
 - o White Copy - Submit to Webasto Product North America, Inc.
 - o Canary Copy - Distributor Copy
 - o Pink Copy - Retain with Defective Parts
2. Claims must be accompanied by a diagnostic print out report from the Webasto diagnostic tool. The only exception to this rule is the DBW series heaters which currently do not offer a standard diagnostic interface.
 - o If the connection to the heater using the diagnostics tool is not possible due to a failed control unit, this must be noted on the warranty claim form.
3. Warranty claims must be submitted within 90 business days from the date of service.
4. ALL warranty claims must be accompanied by the associated product **serial number**. Submitted claims containing incomplete shaded fields will also be refused. Please ensure that all fault codes discovered during the diagnosis process as well as the associated test procedures performed should be noted in the problem description field.
5. Approved claims will be reimbursed by a Credit Memo to the associated distributor account.
6. Webasto will process approved claims within one (1) month of receipt.
7. Defective parts must be properly tagged and retained at the repair facility for 90 days from the date of service. See page 25 for an example of the defective parts tags.

IMPORTANT NOTICE: Webasto Product North America must receive the warranty claim within 90 days of the service repair date. Claims submitted more than 90 days past the date of repair will be rejected.

IMPORTANT NOTICE: For Marine Heater Claims, use form # WBCL500124 which can be ordered through customer service. (800) 860-7866. Complete the marine form using the same method as described for form # 907859.

Mail completed forms to: Webasto Product North America, Inc.
ATTN: Warranty Administration
15083 North Road
Fenton, MI 48430

Online Claim Submission

Warranty claims may also be submitted online **ONLY** after Webasto Product has authorized dealer access to the claim system. This access is separate from the technical website login credentials. To request access please contact your Regional Sales Manager or the Warranty Administrator at (800) 860-7866.

Online Warranty System: http://www.techwebasto.com/warranty_claim_main.htm

1. Similar to the available printed form(s) (item # 907859 or WBCL500124); a diagnostic report will be required dependent on the product being submitted for warranty. The system will automatically request a diagnostic report upload to continue the submission process. (system will accept .txt, doc, .jpg and file extensions)
2. Warranty claims must be submitted within 90 business days from the date of service.
3. ALL warranty claims must be accompanied by the associated product **serial number**. If the serial number cannot be validated during claim submission the system will require a copy of the original sales invoice to continue.
4. Approved claims will be reimbursed by a Credit Memo to the associated master distributor account.
5. Webasto will process approved claims within one (1) month of receipt.
6. If a part return is requested the system will generate a printable packing list and shipping label including the necessary RMA information. Ensure to include the packing list with the part return.

Heater Warranty

Heater Failure Codes:

Below is a list of detailed codes that describe the specific heater / unit failure. These failure codes must be listed on each warranty claim submitted. If failure codes have not been associated to the part failure, the claim **WILL** be refused.

This failure code system has been broken into a three step process. Use the tables below to locate the proper code.

EXAMPLE: If a failure code was needed for a defective circulation pump

→ Step1 = 14 (Water System)
 → Step 2 = 14B (Circulation Pump) = Failure Code: 14B14
 → Step 3 = 14B14 (Pump Motor Defective)

Step 1: Define System

The first step is determining which system the failure falls into. (Water System = 14)

Step1			
Failure Code	Description	Failure Code	Description
11	Basic equipment and peripherals	16	Exhaust system
12	Electrical electronic equipment	17	Air conditioning system
13	Fuel / combustion system	18	Bus top
14	Water system	19	Energy station
15	Air systems		

Step 2: Define Location

Now that the system has been defined the specific location of the failure must be determined. (Circulation Pump = 14B)

Step 2			
Failure Code	Description	Failure Code	Description
11A	heater	12L	aerial
11B	heater holder	12M	micro switch BT
11C	mounting parts (screws, clips, ...)	12N	thermo call
11D	dosing pump holder	12O	locking diode max. 1A
11E	hoods	13A	fuel lines
11F	front box	13B	fuel pumps
11G	scopes of delivery, kits	13C	dosing pumps
11H	bus top cpl.	13D	solenoid valve
12A	control unit	13E	check valve
12B	digital timer	13F	fuel extractor
12C	wiring harness	13G	burner
12D	transmitter	13H	supply unit
12E	receiver	13K	fuel filter
12F	thermostat / sensors	13L	diaphragm damper
12G	relay / switch	13M	glow plug
12H	relay board	13N	flame detector
12J	air conditioning control element	13O	electronic ignition unit
12K	diagnostic tester	13P	gaskets

Step 2 Continued			
Failure Code	Description	Failure Code	Description
13R	US-tank / expansion tank	16B	exhaust silencer
13S	connection elements	16C	fasteners
13T	electrodes	16D	gaskets
13U	bleed valve	17A	evaporator
14A	heat exchanger	17B	servo motor
14B	circulating pump	17C	condenser
14C	hoses	17D	pipng
14D	pipes	18A	BT cover
14E	thermostat valves	18B	frame
14F	check valves	18C	end cover interior trim
14G	gaskets	18D	inner frame
14H	connection elements	18E	opening mechanism
14J	burner head	18F	emergency-release
14K	water filter	18G	locking
15A	air intake silencer	18H	drive assy
15B	air intake hoses	18J	fan / solar
15C	fan / drive assy	18K	gasket BT
15D	gaskets	19A	water circulation
15E	air ducting hot air	19B	refrigeration cycle
15F	heat exchanger air units	19C	expansion valve
15G	front box	19D	servo motor
15J	air ducting IAC	19E	heat exchanger
16A	exhaust pipe		

Step 3: Define Type of Failure

System and location have both been defined; the last step is the type of failure. (Pump Motor Defective = 14B14).

Step 3			
Failure Code	Description	Failure Code	Description
11A02	central cover damaged	11A12	thermal damage of impeller by rotation
11A03	central cover incorrect	11A13	flame signal < 650 mΩ
11A04	type plate duplicate damaged	11A14	flame signal < 650 mΩ - burner with position spring
11A05	type plate duplicate missing	11A15	smoke - service pack 1.2
11A06	adhesive label missing	11A16	smoke - service pack 2
11A07	adhesive label incorrect	11B01	color damage
11A08	type plate damaged	11B02	mounting jack missing
11A09	flame break	11B03	weld nut missing
11A10	smoke	11B04	thread damaged
11A11	thermal damage of impeller by fan stop	11B05	mounting bold missing

Step 3 Continued			
Failure Code	Description	Failure Code	Description
11B06	rubber grommet missing	12A19	over voltage identification
11B07	broken (constructional failure)	12A20	activation burner - draft fan motor not ok
11C01	receiving sleeve for dosing pump missing	12A21	activation dosing pump / SV (TT 98) defective
11C02	clip missing	12A22	activation water circulation pump defective
11C03	screw broken / twisted off	12A23	activation glow plug defective
11C04	nut not welded on	12A24	activation flame detector defective
11C06	not appropriate for the type of duty	12A25	activation reversing valve water circuit defective
11D01	incorrectly assembled	12A26	activation LED display vehicle
11D02	adhesive label incorrect	12A27	activation electronic ignition unit / solenoid valve defective
11E01	color incorrect	12A28	activation external vehicle fan defective
11E02	bubbles in treated surface	12A29	flame detector - sensor resistor not in order
11E03	underground treatment incorrect	12A30	unauthorized interference – flash loader (TT-V)
11E04	different rubber profiles	12A31	doesn't switch to sleep mode
11E05	form transitions not in order	12A32	
11E06	gap dimension to bus roof	12A33	EPROM program failure
11F01	housing damaged	12B01	display segment failure
11F02	surface protection damaged	12B02	display glass damaged
11F03	connecting pieces damaged	12B03	continuous lighting
11G01	missing parts not in part list (constructional failure)	12B04	no lighting
12A01	locked (function after releasing ok)	12B05	"stop-set" display while programming
12A03	frame broken	12B06	programming will be deleted
12A05	wrong part assembled	12B07	not programmable
12A06	temp. sensor defective / temp. display incorrect	12B08	no tuning on signal
12A07	temp. sensor incorrectly fitted	12B09	coding plug missing
12A08	plug cage damaged	12B10	plug damaged
12A09	checksum defective - failure "000"	12B11	key has no function
12A10	seal defective	12B12	key hard to operate
12A11	no communication / no diagnosis	12B13	key incorrect assembled
12A12	data record error	12B14	key is sticking
12A13	printed circuit board not connected through	12B15	key rubber torn out
12A14	screw corroded	12B16	potentiometer defective / interruption
12A15	screw torn off	12C01	plug corroded
12A16	screw twisted off	12C02	plug locking defective
12A17	board connections not in order	12C03	cable isolation not similar to drawing
12A18	low-voltage identification		

Step 3 Continued			
Failure Code	Description	Failure Code	Description
12C04	crimp contact incorrect	12F07	accumulator thermostat defective (IAC)
12C05	connection tube loose	12F08	Temperature sensor short circuit (design modif.)
12C06	length not concurrent to drawing	12F09	N/A
12C07	incorrectly connected	12G01	relay defective
12C08	incorrectly fitted	12G02	wrong relay fitted
12C09	incompletely fitted	12H01	earth bold broken
C10	malfunction (constructional failure)	12H02	earth bold loose
12D01	not programmable	12H03	base plate not ok
12D02	LED doesn't light	12M01	Un-calibrated
12D03	LED lights up continuously	13A01	material fault
12D04	range too short	13C01	not sealed
12D05	loose connection	13A02	geometrically
12D06	battery discharge	13A03	not fuel-resistant
12D07	battery leak	13B01	incorrect pressure
12D08	installation failure by customer	13C02	clocks but doesn't delivers
12D09	battery spring missing	13C03	plug mechanically damaged
12D10	key hard to operate	13C04	plug can't be contacted
12D11	battery connection broke off	13C05	assy mounted incorrectly
12D12	display segment failure	13C06	discharge flow too small
12D13	continuous lighting on display , all symbols appear	13C07	discharge flow too large
12D14	key is jamming	13C08	union blocked up (protecting cap)
12D15	key torn off	13D01	doesn't close
12D16	LED does not light	13D02	doesn't open
12D17	dust in display	13D03	plug defective
12E01	cable squashed	13D04	plug damaged
12E02	programming not ok	13D05	screen blocked up (contaminated)
12E03	no switch-on signal	13D06	damage by medium
12E04	sensitivity too low	13D07	electrical discontinuity
12E05	not programmable	13E01	doesn't close
12E06	incorrect housing	13G01	non-woven material damaged
12E07	no response signal	13G02	non-woven material fitted incorrectly
12F01	temperature sensor interruption	13G03	small fuel pipe damaged
12F02	temperature sensor circuit	13G04	small fuel pipe blocked up
12F03	icing sensor not connected	13G05	carburized
12F04	temperature sensor has no function	13G06	evaporator holder loose
12F05	temp. sensor ex.-valve fitted incorrectly	13G07	co-peaks
12F06	temp. sensor in wrong position	13G08	orifice

Step 3 Continued			
Failure Code	Description	Failure Code	Description
13G09	ignition chamber blocked	13M05	warm resistance not ok
13G10	back wall leaning	13M06	cold resistance too large
13G11	revertive burning	13M07	cold resistance too small
13G12	glow pin guide gap too large	13M08	broken
13G13	violent impact, malpractice on fuel duct	13M09	broken off
13G14	Start air hole closed	13M10	electrical discontinuity
13G15	carburized on glow plug	13M11	pre-heating element electronically interrupted
13G16	fuel arrival closed	13M12	pre-heating element cold resistance too large
13H01	current consumption too high	13M13	pre-heating element cold resistance too small
13H02	full of sand	13M14	pre-heating element warm resistance too large
13H03	cover damaged	13M15	pre-heating element warm resistance too small
13H04	no current consumption	13M16	Cold resistance to high - red point present
13H05	fuel channels blocked up	13M17	Cold resistance to high - TT-V prematurely aged
13H06	discharge flow too large	13M18	not possible to dismount - electrical ok
13H07	discharge flow too small	13M19	pre-heating element short circuit
13H08	blower seal fitted incorrectly	13N01	cable squashed (installation)
13H09	cover seal damaged	13N02	cable break
13H10	buffer store leaky	13N03	cable corroded
13H11	doesn't deliver	13N04	cable isolation scorched
13H12	fuel transfer blocked	13N05	spot weld point defective
13H13	fuel coupling (viton seal) missing	13N06	electronically interrupted
13H14	fuel coupling (viton seal) fitted incorrectly	13N07	warm resistance not ok
13H15	gear unit cover missing	13N08	cold resistance too large
13H16	hole missing	13N09	cold resistance too small
13J01	spray pattern not ok	13N10	broken
13K01	blocked	13N11	broken off
13L01	leaking at the fuel transfer	13N12	not possible to dismount - electrical ok
13L02	fuel coupler (viton seal) missing	13Q01	sealing material broken out
13L03	fuel transfer charred	13R01	screw connection tank extracting device defective
13M01	cable squashed (installation)	14A01	thread torn out
13M02	cable break	14A02	burnt threw
13M03	cable corroded	14B01	current consumption too large
13M04	spot weld point defective	14B02	shaft corroded

Step 3 Continued			
Failure Code	Description	Failure Code	Description
14B03	cable squashed (installation)	14J05	screw stripped
14B04	installation failure by customer	14J06	cast skin in exhaust pipe
14B05	leaking at the o-ring	14J07	cast skin in exhaust pipe
14B06	connection to heat exchanger broken	15C01	blower motor crimp connection put on (end shield)
14B07	impeller blocked / contaminated	15C02	fan cover damaged
14B08	gasket damaged	15C03	fan cover scorched
14B09	water hose leaking	15C04	axial shaft play of blower motor too large
14B10	running noise	15C05	current consumption of blower motor too large
14B11	discharge flow too small	15C06	short circuit of blower motor
14B12	flange missing	15C07	rotation speed of blower motor too low
14B13	clip loose	15C08	blower motor is rough-running
14B14	pump motor defective	15C09	blower motor running noises
14B15	pump blocked	15C10	impeller is grinding
14B16	pads of mechanical shaft seal (Kaco) stuck together	15C11	impeller blocked by a foreign body
14B17	belows of mechanical shaft (Kaco) torn	15C12	impeller damaged
14B18	pads of mechanical shaft (Simrax) stuck together	15C13	impeller scorched
14B19	belows of mechanical shaft (Simrax) torn	15C14	blower gap too small
14B20	pump motor defective - production before day 120 year 2004	15C15	blower gap too large
14B21	Humidity over cover-cable nozzle-housing	15C16	cable squashed (installation)
14B22	Humidity over cable nozzle (design modification)	15C17	flange gasket not correctly fitted
14C01	material failure	15C18	too loud
14C02	compression ring on coupling not sealed	15C19	motor housing deformed (geometrically not ok)
14F01	too loud	15C20	hot air rotor grinding
14F02	doesn't close	15C21	hot air fan moved on shaft
14G01	water sealing ring wrong positioned	15C22	holder broken
14H01	T-piece incorrect	15C23	wrong blower / not connected
14H02	connection pipe, seat of support sleeve not ok	15C24	blower - grinding noises
14J01	plug leaking	15C25	blower - squeaking
14J02	water pipe leaking	15C26	no full power
14J03	water pipe damaged	15C27	condenser not ok
14J04	thread torn out	15C28	fan causes smell

Step 3 Continued			
Failure Code	Description	Failure Code	Description
15C29	paddle wheel detached - hub ripped	18D01	deformed
15G01	motor defective	18D02	scratched
15J01	air filter contaminated (intake grille)	18D03	paint damage
15J02	check valves blocked (intake grille)	18D04	mounting bracket not ok
16A01	loose	18E01	rough-running
16A02	insulating disk not riveted correctly	18E02	rattling
16A03	internal diameter of connector too small	18E03	squeaks during opening / closing
16A04	flexible pipe split at the end	18E04	slotted disc broken out
16A05	spot welding on exhaust pipe not ok	18E05	bracket broken
16B01	weld seam incomplete	18E06	spring on bracket broken
16B02	circuit points not welded	18E07	handle damaged
16C01	pipe clip loose	18G01	rough-running
16D01	exhaust gas seal positioned incorrectly	18H01	loose
17A01	evaporator / vanes damaged	18H02	worm gear broken
17A02	evaporator not closed with sealing caps	18J01	Rattling
17A03	condensation water connection fitted incorrectly	18J02	grinding
17A04	condensation water connection broken	18J03	running
17A05	expansion valve incorrect	19A01	stress crack corrosion (pipe leaky)
17A06	expansion valve without function	19A02	Micro cracks (pipe leaky)
17A07	expansion valve incomplete	19A03	pipe deformed
17A08	flap doesn't close	19A04	sealing caps missing on pipe
17A09	noises at the flap	19A05	pipe not similar to drawing
17C01	condenser not similar to drawing	19A06	clamps loose
17D01	pipes without sealing caps	19B01	collector loose on connection
17D02	pipes not like drawing	19B02	collector loose on sealing
17D03	isolation damaged	19B03	pipe deformed
17D04	isolation doesn't fit exactly	19B04	sealing caps missing on pipe
17D05	sight glass defective	19B05	pipe not similar to drawing
17E01	refrigerant volume too small	19B06	pipe leaky on soldering point
17E02	accumulator iced (IAC)	19C01	leaky on connection
17E03	accumulator fluid volume too small (IAC)	19C02	leaky on soldering point
17E04	accumulator leaking (IAC)	19C03	discharge too low
18A01	broken	19D01	wrong mounting direction
18A02	guide way broken out	19D02	electronic defect
18B02	broken	19D03	discharge too low
18C01	scratched	19E01	leaky on soldering point
18C02	paint damage		

Return Materials Authorization (RMA)

A Return Materials Authorization (RMA) is required from Webasto prior to returning any product. The Webasto warranty / returns department will provide the distributor with an RMA number and shipping instructions. Depending on the reason for return, there may be a 20% re-stocking fee. The RMA number must be prominently displayed on the shipping container and referenced on all correspondence pertaining to the returned product.

To contact the Webasto warranty / returns department:

(800) 860-7866 or (810) 593-6000

Please have the following information available prior to calling for an RMA:

- The serial number and/or original invoice number
- The reason for return.

IMPORTANT NOTICE: When any product is returned without an RMA, there will be a \$50.00 administration fee charged to the associated distributor account.

Claim Reimbursement:

- Travel Times - Travel time is ONLY covered for marine heater claims. Must provide proof of purchase from a Webasto authorized marine product distributor.
- Labor Times - Recovery is based on the applicable labor time guide starting on page 17.
- Labor Rate - Recovery is based on the standard distributor service rate, which is a published / verifiable rate.
- Parts - Recovery is based on component cost plus markup for shipping and handling.

Refused Claims:

In the event that a claim is refused or adjusted, the distributor will be properly notified outlining the reason for the adjustment or refusal. With the exception of the Thermo Top C, replacement and removal of heater, as a means of repair, is not covered.

Note: Maintenance components including: fuel nozzles, filters and overheat fuses are not covered. For a full list of non-covered components refer to page 6.

Flat Rate Labor Guide

Maximum allowable labor time is a combination of testing and diagnosis and one of the following operations:

1. Exterior component repair
2. Easily accessible component repair
3. Complete dismantling repair and reassemble.

Testing and Diagnosis

A functional test is required to isolate defective components.

- The Webasto PC Heater Diagnosis Kit, part number 90009064D, can be obtained to perform functional tests on all Webasto heaters except the DBW series (2010, 2020 and 300).
- Tester part number 50440280A can be obtained for DBW series heaters

Testing and diagnosis allowable time includes post repair operational testing.

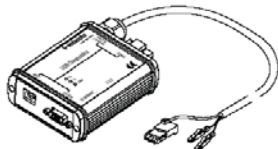

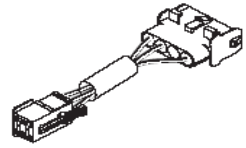



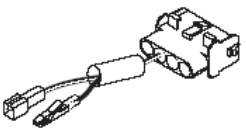

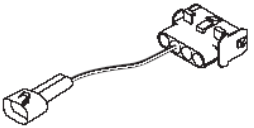





Claims with labor times exceeding the times listed in this manual without approval, in writing, will be adjusted accordingly.

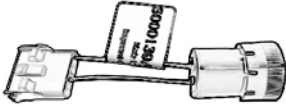

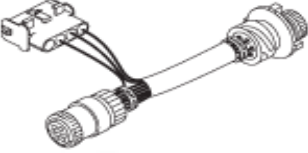
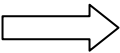
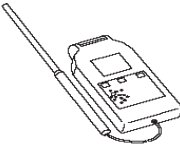
Heater Model:	Air Top Series	ALL
	Thermo Top Series	ALL
	DBW Series	ALL
	Thermo Series	230 / 300 / 350

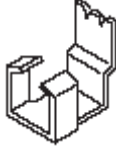

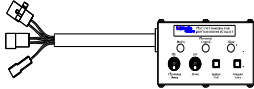


Part Description	Operation	Time Allowance (Minutes)
A. Testing & Diagnosis		30
B. Travel Allowance	Marine Heater Claims Only	See Appendices
C. Exterior Component Repair (30 minutes maximum on all models)		
*Timers	Replace	30
Thermostats	Replace	30
Temperature Limiters	Replace	30
Relays	Replace	30
Control Switches	Replace	30
Fuel Pumps	Replace	30
Ignition Coils	Replace	30
Coolant Pumps	Replace	30
Control Unit (Control Circuit Board)	Replace	30
D. Easily Assessable Component Repair (45 minutes maximum on all models)		
Blower Motor (DBW Series)	Replace	45
Combustion Chambers	Replace	45
Burner Head	Replace	45
Electrodes	Replace	45
Internal Harness	Replace	45
Fuel Solenoid	Replace	45
Coupling (Clutch)	Replace	45
Pressure Pipe	Replace	45
Fuel Pressure Relief Valve	Replace	45
Ceramic Igniter	Replace	45
E. Complete Dismantling Repair and Reassemble (1 hour maximum on all models)		
Removal and Replacement of Thermo Top C	Replace	60
Heat Exchangers (Coolant Heaters)	Replace	60
Shaft or Bearing Assembly	Replace	60
Combustion Air Fans (Air Heaters)	Replace	60
Burner Assembly (Air Heaters)	Replace	60

*Timers purchased on the same sales invoice as the heater are eligible for the full duration of the heater warranty. Individual timer purchases are treated as an accessory and must be accompanied by proof of purchase.

Tools and Equipment

AIR TOP & THERMO SERIES HEATER TOOLS			
PART #	DESCRIPTION		
9009064D	PC Diagnostic Kit (Hardware V2.2 USB / Serial adapter cable and software)		
83661B	Thermo 90 diagnostic tool		
5092556B	Thermo 90S diagnostic tool		
92566B	AT 2000 / TTC / Z diagnostic adapter		
5000009A	AT2000 w/ Diagnostic connector to heater		
5092555B	AT 3500/5000 - 2000ST/3500ST/5000ST diagnostic adapter		
5001493A	AT3500ST / AT5000ST / EVO		
20865D	Thermo 230 / 300 / 350 diagnostic adapter (Heaters on imported vehicles)		
66265A	Thermo 300 diagnostic harness adapter (Mercedes Citaro)		
97034A	Thermo 230 / 300/350 triangle adapter (North American Heaters)		

PART #	DESCRIPTION			
5000139A	Diagnostic tool adaptor Thermo 230/300/350			
21333A	BW 80 / DW 80			
92637A	Thermo 230 / 300 / 350 (Van Hool)			
	CO2 Test Apparatus	Dräger MSI - Variox Local Resellers: ASC - MasterTek 800-327-4260 586-840-3220		

DBW SERIES HEATER TOOLS				
PART #	DESCRIPTION			
310646	Ignition electrode gapping tool (All DBW Heaters)			
50440280A	Test tool (DBW 2010 / 2020 / 300 - 12 & 24 Volt)			
600190	Fuel pressure testing gauge (DBW 2010 / 2020 / 300) or (Thermo 230 / 300 / 350)			
116274	Harness adapter tool DBW Series Sensoric Heaters (Van Hool)			

Appendices

Appendix A: Limited Non-Transferrable Warranty

LIMITED NON-TRANSFERABLE WARRANTY

Webasto Product North America, Inc. (hereinafter referred to as Webasto) warrants their heaters and heater kits against defects in material and workmanship for two (2) years effective at the time of installation or vehicle registration date for Original equipment installation (OE). This warranty period may not exceed three (3) years from the original date of sale by Webasto. This warranty period shall be superseded by a contractual agreement.*

** Warranty coverage for marine and off-road applications containing DBW series heaters and the CSL Cargo Heaters are limited to (2) years or 3,000 operating hours. All other models are limited to 2,000 maximum operating hours.*

Replacement parts are covered for six (6) months or the remainder of the original warranty period, whichever is longer. Replacement heaters are considered a "Replacement Part".

The intent of the Webasto warranty is to protect the original end-user of the heater from such defects and provide free repair and replacement of defective parts in the manner provided herein. During the warranty period the exclusive remedy will be for Webasto, at their discretion, to repair or replace those parts which are demonstrated to be defective in material or workmanship.

While warranty is provided to the "original end-user", it is to be administered and serviced by Webasto Product personnel or through an authorized Webasto distributor in accordance with the Webasto warranty policy or contractual agreement between Webasto and a second party.

Information concerning all warranties may be obtained by calling (800) 860-7866.

Limitations: Webasto specifically excludes and limits warranty from the following:
Normal wear of service parts: **(fuel nozzles, filters and overheat fuses are not covered).**

Removal and replacement of heater (with the exception of the Thermo Top C)

Damage to product in transit. All claims must be filed with carrier.

Improper installation, which is not in accordance with valid, supplied installation instructions or approved OEM applications.

Deterioration due to normal wear, corrosion, abuse, damage, accident, improper storage or operation.

Modification of product by alteration, use of non-genuine parts or repair by unauthorized personnel.

Economic loss for expenses related to travel, vehicle disability, personal injury or other incidental or consequential damages arising from any breach of this expressed warranty.

Owner's Responsibilities:

Service heater at the start of each season. While such maintenance may be performed by any company, Webasto recommends that you use only Webasto authorized distributors. Improper or incorrectly performed maintenance or repair voids this warranty. Service parts including fuel nozzles, filters and overheat fuses are not covered under warranty.

A Warranty Registration Card is included with the sale of each heater. It is the owner's responsibility to complete this card and return it to Webasto for registration. A proof of purchase is required for all heaters that are not registered.

THIS WARRANTY IS NON-TRANSFERABLE.

IMPLIED WARRANTIES INCLUDING THAT OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WARRANTY. WEBASTO DISCLAIMS ANY LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THE LIMITATION AND EXCLUSIONS VARY AMONG STATES AND CANADIAN PROVINCES AND MAY NOT APPLY TO YOU. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY AMONG STATES AND CANADIAN PROVINCES.

Appendix B: Marine Travel Allowances

Travel costs will be compensated at a rate not to exceed \$85.00 USD per hour. Travel costs will only be accepted if warranty is concluded and will be limited up to a maximum of 65 miles (one-way), unless differently pre-approved beforehand. Multiple trips will not be compensated unless special authorization is requested through the local warranty department upon evidence shown by distributor.

IMPORTANT NOTICE: The information described in Appendix B is for a marine vessel with a Webasto heater installed only. Proof of purchase must be provided from a Webasto authorized marine product distributor to validate the claim.

Appendix E: Sample Defective Parts Tag

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DEFECTIVE PARTS TAG

To: Webasto Product N.A. Inc.
15083 North Rd.
Fenton, MI 48430

From:

Claim No. _____

Date: _____

Webasto P/N: _____

Part Description: _____

Heater Name: _____

Heater Part No.: _____

Serial No.: _____

Failure Code: _____

Hours of Operation: _____

Description of Defect: _____

Appendix F: Technician Checklist

WORK ORDER:		VEHICLE YEAR:	
HEATER MODEL:		VEHICLE MAKE:	
SERIAL NO.:		VEHICLE MODEL:	
TECHNICIAN:		VIN:	
CATEGORY	DIAGNOSTIC TASK	RESULTS	ACTION REQUIRED
Preliminary Check	Installation Position		
	Fuel pump mounting position (where applicable)		
	Proper length of fuel line before and after fuel pump		
	Fuel Level		
	Battery Condition and Voltage		
Visual Inspection	Wiring connections clean, tight and corrosion free		
	Intake and Exhaust routing		
	Fuel line routing and Clamps tight		
	Debris in combustion or heated air intake		
	Fuses		
6 step diagnosis process	Verify the customer complaint		
	Determine related symptoms		
	Analyze the symptoms		
	Isolate the problem		
	Complete the repair		
	Verify proper operation		
Maintenance	Run heater 20 minutes minimum once a flame is established		
	Clean air intake of debris		
	Clean and tighten battery terminal connections		
	Check and clean exhaust pipe		
Identifying Failure Codes			
Flash Code	If the system uses a control switch the LED will flash if a problem occurs. Only slow flashes should be counted to identify the failure		
	If a timer is used an error code will be displayed until the problem has been repaired		
	If a lighted toggle switch is used the LED will flash if a problem occurs. Only slow flashes should be counted to identify the failure		
PC Diagnosis	Software and hardware drivers must be pre installed for communication between the heater and PC		
	Codes set (actual or not actual)		
	Diagnostic Summary Available		



Webasto Product N.A., Inc.
15083 North Road
Fenton, MI 48430 USA
Phone: 810-593-6000
Fax: 810-593-6001
Email: info@webasto-us.com
Internet: <http://www.webasto.us>
<http://www.techwebasto.com>