



The Leader in Heated Washer Systems

AT-38 On-Demand

For Driving Safety and Convenience

Installation & Operation Manual for AT-38OD Unit

***Our Warmest Congratulations!
You are now the Owner of
a Heated Washer Fluid Unit !***

Driving in today's congested traffic is an experience filled with unpredictable weather and split second decisions, sometimes leading to accidents.

The Heated Washer Fluid Unit is a patented windshield cleaning device that puts you back in control, providing clear road vision throughout every season, even in the worst weather conditions.

Thank you for purchasing our Heated Washer Fluid Unit.

Enjoy clear driving in the seasons ahead.

***Alpha
Therm***

AlphaTherm Copyright Information

The AT-380D incorporates proprietary technology that is protected by worldwide patents and is the exclusive property of AlphaTherm.

Warnings and Notes

Warning: When operating the AT-380D unit, do not place hands, face or other body parts in or near the heated washer fluid spray.

Before Installation

Before installing the AT-380D unit, please read this manual thoroughly and retain it for future reference.

Package Components

- ▶ Installation Manual (this booklet)
- ▶ AT-380D unit w/attached cables
- ▶ Installation bracket
- ▶ Red power cable with inline fuse (60 amps) (attached to unit)
- ▶ Black power cables (ground) (attached to unit)
- ▶ 8 cable ties
- ▶ 6 self tapping screws
- ▶ 2 hose splicers
- ▶ 1 rubber tube (length 48 inch) or 2 rubber tubes (length 24 inch each) to connect the unit to the washer system, if needed

Installation Tools Needed

(not supplied)

- ▶ Flathead Screwdriver
- ▶ Wrench to fit vehicle battery positive and negative terminals
- ▶ Drill with 1/4" socket or 1/8 inch drill bit for self tapping screws
- ▶ Side Cutter (dykes)
- ▶ Flashlight (if needed)

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Contents

Disclaimer	4
Introduction	5
Installation	6
Installation Steps	7
Operation	9
Troubleshooting	10
Warranty	11

Disclaimer

Although AlphaTherm has taken all reasonable care to ensure that the information contained in this Installation Manual was accurate in all material respects at the time of publication, AlphaTherm PROVIDES NO ASSURANCE, REPRESENTATION, WARRANTY OR GUARANTEE, expressed or implied (including third party liability), with regard to this manual.

The entire information contained in this Installation Manual is provided by AlphaTherm "AS IS" and without warranty of any kind, express or implied, including (but not limited to) any implied warranties of merchantability, fitness for any particular purpose, or non-infringement. Accordingly, by using the AT-38OD unit and this information to the extent permitted by law, you agree that AlphaTherm (including, without limitation, its subsidiaries, affiliates, agents, officers, directors, employees and insurers) is not and will not be liable for losses or damages resulting from this Installation Manual, its use, any information contained therein or the installation of the AT-38OD unit.

All product illustrations and specifications are based upon current information at the time of publication. Although descriptions are believed correct, complete accuracy cannot be guaranteed. AlphaTherm reserves the right to make changes of any kind at any time, without notice or obligation, to the information contained in this Installation Manual. All data and information are subject to change without notice and AlphaTherm assumes no obligation to update or correct the information in this manual.

Introduction

The AT-38OD unit is designed to enhance the driver's all-season safety and convenience by increasing over all performance of a vehicle washer system. Unit works with virtually all existing washer / wiper systems.

During winter months heated washer fluid helps to:

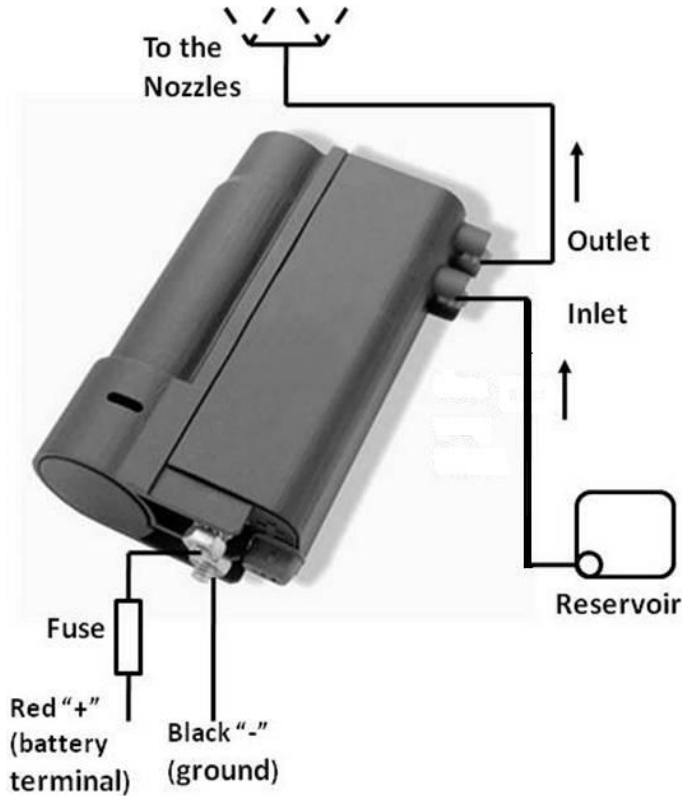
- Remove light frost and ice from the windshield
- Unblock partially frozen washer nozzles
- Extend the wiper blades longevity by keeping them flexible and less deteriorated
- Defog windshield

During warmer months heated washer fluid helps to:

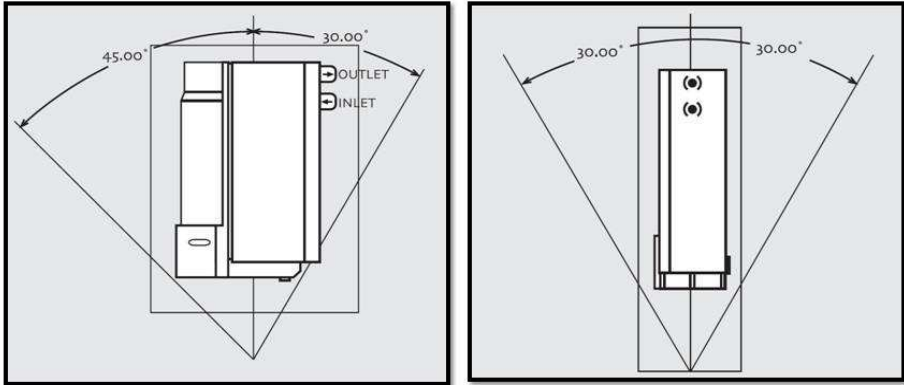
- Remove grime caused by road conditions, insects and glare from the windshield
- Improve the wiper blades effectiveness by preventing accumulation of wax and oil.

NOTE: The efficiency of the AT-38OD unit will depend on factors such as the condition of the wiper blades, the type and condition of the nozzles, the quality of the washing fluid, and the severity of the existing weather conditions. In addition, the unit must be mounted within the parameters as outlined on the following page.

Unit Installation Diagram



Positioning Limitations



WARNING: The unit must be installed in a system with the proper rated washer fluid to prevent freezing or the unit might be damaged and the warranty will be void.

Installation Steps

Important:

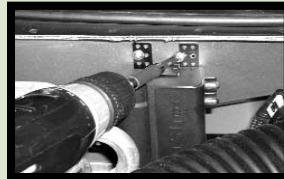
The AT-38OD unit should be located in the engine compartment based on the following guidelines:

- As close as possible to the nozzles, preferably on the firewall.
- As far as possible from the hottest areas of the engine.
- Vertically positioned according to the specifications shown in the illustration titled "Positioning Limitations" on the previous page.

1. Attach bracket to the unit. The plastic coated "L" shaped tab is the top of the bracket. Slide the upside down "T" at the bottom of the bracket into the slots located on the bottom of the unit. Then snap the "L" tab over the top of the unit. Use the bracket/unit to find the proper mounting location. In some cases it will be easier to mount the bracket to the vehicle without the unit attached. If this is the case, use the screwdriver to gently pry the "L" off the top of the unit being careful not to bend the bracket.



2. Attach the supplied bracket to the desired vehicle location using four of the six screws (provided). You will need a drill and 1/8" socket or the 1/8 inch drill bit. If there is no access to the lower part of the bracket, use only two screws at the top. If the installation surface is not flat, bend the bracket to fit the curved area. Do not bend the bracket in the surface area that makes contact with the unit. Be sure that there is nothing directly behind the mounting surface that the screws can puncture or damage. If necessary, re-install the unit to the bracket after the bracket is mounted.



3. Remove yellow protective caps from the unit's input and output ports. Cut or separate the hose between the washer pump and nozzles. Some vehicles may have a hose splice close to the area you chose to mount the unit. If not, use the side cutter to cut the hose.



4. Connect the hose coming from the washer pump to the unit's input port (indicated by an arrow ←). If necessary, use a piece of hose and a splicer (provided) to extend the hose length.

Warning: Some washer fluid may flow from the unit when you remove the yellow caps. The unit was primed with a standard washer fluid to prevent any damages during the initial installation.



Installation Steps

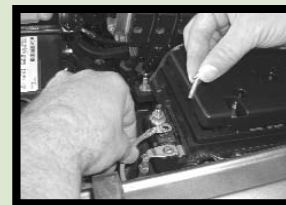
5. Connect the hose coming from the nozzles to the unit's output port (indicated by an arrow →).
If necessary, use a piece of hose and a splicer (provided) to extend the hose length.

Warning: Prior to proceeding to the next step the unit must be primed. To do this, turn the ignition key to the on position and activate vehicle washer switch until washer fluid starts to spray out of nozzles. Connecting power to the unit without fluid can cause permanent damage to the unit and void the warranty. Once the unit is primed it should remain primed for unit life as long as the unit is not inverted.



6. Using the correct size wrench, connect the ring terminal of the opposite end of the red thick cable (with 60 Amps in-line fuse) to the positive side of the battery. This connection must be made to a high current positive terminal at the battery, jump post, etc.

Mount the fuse with provided screws to an open location in the engine compartment.



7. Using the correct size wrench, connect the ring terminal of the opposite end of the black thick cable to any negative (-) body ground. This connection must be free of paint and rust. This connection could be made at the battery, alternator bracket, vehicle frame, etc.

WARNING: High current cables attached to the unit must not be removed. All four (4) 10 mm nuts securing the high current cables to the unit must remain at the specified torque of 70 in/lb.



8. Secure all cables and wires with the provided cable ties to avoid contact with hot engine parts or moving objects.

The installation is complete.



Note: Although *AlphaTherm* has taken all reasonable care to ensure that the information contained in this Installation Manual is accurate and complete, installation may vary for each model and certain vehicles may require additional adjustments for proper installation. In the event you face any installation issues or concerns, please call us at 248-489 2400 for further instructions and assistance.

Operation

The AT-380D operates in “On-Demand” mode.

The unit starts to operate when the ignition is on (engine running) and the battery voltage level is higher than 13.0 volts. Once the unit is activated, the washer fluid inside its heating chamber will be heated and kept within pre-determined temperature limits (125 – 135°F) so there is always hot fluid inside the unit’s heating chamber which can be used by a driver for cleaning the windshield.

Each time the driver activates the factory installed washer system, heated washer fluid is applied to the windshield for approximately the first 3 seconds of spray. Three seconds of the spray delivers approximately 50-60 cc of fluid that is considered sufficient amount of fluid for one spray. The next portion of heated washer fluid is available in 10-20 seconds (depending on ambient conditions).

The unit uses full power of 50 Amps for 30 seconds to heat the washer fluid to the pre-determined temperature limits (125 – 135°F) and minimal power to keep it within these limits. The unit’s power consumption is less than 2 Amps per hour.

Once the unit starts to operate (engine is running), it will heat the washer fluid in approx. 30 seconds. Driver operates the washer system manually to spray the heated fluid onto the windshield. Recommended duration of spray is 3 seconds. Driver can spray as many times as he wants. Best results are achieved when time intervals between sprays are approximately 20 seconds.

NOTE: The washer fluid expands due to the heating process thus some dripping during the unit operation is normal.

The engine must be running in order to have the AT-380D unit in operation.

NOTE: *In order to protect your vehicle from electrical overload the AT-380D is designed to only operate at 13.0 or more volts. If your vehicle has a weak battery or a defective alternator and produces less than the required voltage at idle, the unit will not operate properly. This may indicate the need to replace your vehicle’s battery or alternator. To test this problem, rev your vehicle and measure the battery voltage. If voltage is higher than 13.0 volts, and the unit still does not heat the washer fluid, contact technical assistance.*

Troubleshooting

INDICATION	MEANING	ACTION
No spray during manual priming	The hoses that connect to the unit's inlet and outlet ports may not be connected properly	Check the connection of hoses. Refill the washer tank
Spray is not hot during first 3 seconds of spray	Unit doesn't turn on due to reasons described in the "Unit doesn't turn on" section Unit is malfunctioning	See the "Unit doesn't turn on" section Discontinue use of the unit and refer to Technical Assistance
Washer spray was OK before the unit installation but is now weak	The hoses, that connect to the unit's inlet and outlet ports may be banded or pinched	Check condition of the hoses
Unit doesn't turn on	The unit has detected that the voltage is less than 13.0 volts, indicating that the engine is not running or the vehicle's electrical system is overloaded No connection to battery Positive battery cable in-line fuse is open Poor connection to the ground	Turn the engine on, or if already in the "on" position, check the vehicle's electrical system Check positive and negative cables and connections Check condition of the fuse. If fuse is blown, replace it Check if body ground is connected and if connection is free of paint and rust
Unit begins working, but stops operating abruptly	Vehicle's electrical system must be at least 13.0 volts (at engine running condition) to operate the unit	Check vehicle's electrical system

**Technical Assistance
(248) – 489 – 2400**

Limited Warranty

AlphaTherm hereby warrants this product against any defects in the material or workmanship of the product for a period of 12 months from the date of purchase. Upon notification of a defect, *AlphaTherm* agrees, at its option, to either have *AlphaTherm* technicians or other authorized agents repair the defect, if any, or replace the defective unit or parts thereof. You will not be charged for the price of the new unit, parts or the cost of repair. This warranty does not cover the cost of installation or reinstallation of the defective unit.

This warranty does not cover defects, damage or defacement resulting from acts of God or other external causes, improper installation, vehicle accidents, misuse, abuse, negligence, uses of the device other than originally intended, or modification of or to any part of this product. This warranty does not cover defects, damage or defacement due to improper operation or connection to improper voltage supply or attempting repairs by anyone other than *AlphaTherm* technicians or authorized repair agents.

This warranty applies only to the original purchaser of the unit. A copy of the original purchase receipt must be available.

To obtain warranty service, you must contact an *AlphaTherm* Customer Service Representative at the company's number: (248) 489-2400.

Upon reaching a customer service representative, you will be provided with instructions for returning your defective unit.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. *AlphaTherm* SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE ONE-YEAR, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR YEAR DURATION OF THIS WARRANTY.

Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or allow limitations on how long an implied warranty lasts. Therefore, the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which might vary from state to state or province to province.