



Atwood Mobile Products LLC

Atwood Mobile Products LLC

1120 North Main Street Elkhart, IN 46614-3203

USA & Canada 1-866-869-3118

Internet: <http://www.atwoodmobile.com>

**Model LP**  
**USER'S MANUAL AND INSTALLATION**  
**INSTRUCTIONS**



**Intertek**

TESTED TO UL1484

**For questions concerning your Alarm, please call our  
Customer Service at 1-866-869-3118**

**Please have the following information ready when calling:**

Alarm Model Number (located on the back of alarm):
Alarm Assembly Number (located on the back of alarm):
Date of Manufactured (located on the bottom of alarm):
Date of Purchase:
Where Purchased:

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## **READ ENTIRE MANUAL BEFORE USING THIS ALARM**

Your new Atwood Propane (LP) alarm is a sophisticated instrument that has been carefully designed and tested to detect LP build up in a residential or recreation vehicle environment.

Liquefied Petroleum (LP or Propane) gas can cause hazardous conditions when found in high concentrations. Gas is known to be found in recreational vehicles and the proper detection of this gas provides a safe environment for the occupants of the vehicle.

**THIS ALARM HAS A SEVEN YEAR LIFE, SEE END OF LIFE NOTIFICATION**

### **Liquefied Petroleum Gas Awareness**

LP gas is commonly called Propane and is sold commercially as a suitable fuel in portable and permanent heating and cooking appliances.

It is important to detect LP gas due to its explosiveness at concentrated volumes. This detector is design to alarm at <25% LEL (legal explosive limit).

### **SAFETY ALERT SYMBOLS**

Safety symbols alerting you to potential personal safety hazards, Obey all safety messages following these symbols.



**WARNING**

Avoid possible injury or death



**CAUTION**

Avoid possible injury and/or property damage



## CAUTION

This alarm will only indicate the presence of gas at the sensor. Gases may be present in other areas. Read this entire manual before using the alarm.

### ACTIVE ALARM PROCEDURES

#### IF ALARM SIGNAL SOUNDS:

**1. Operate Test/Reset button;**

1. Immediately move to fresh air-outdoors or by an open door/window. Do a head count to check that all persons are accounted for: Do not re-enter the premises move away from the open door/window until the emergency services responders arrive, the premises have been aired out, and your alarm returns to its normal condition.
2. Call your local Emergency Services Number or 911

( \_\_\_\_\_ )

Fill in your local Fire Department number here

3. After following steps 1 & 2, if your alarm reactivates within a 24 hour period, repeat steps 1 & 2 and call a qualified appliance technician

( \_\_\_\_\_ )

Too investigate for sources of LP from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection, have equipment serviced immediately. Note any combustion equipment not inspected by technician consult the manufacturer's Instructions, or contact the manufacturers directly, for more information about LP safety. Make

sure that motor vehicles are not, or have not been operating in an enclosed area or in close proximity of other vehicles.

*Note: two self-adhesive emergency contact labels are provided. The user must add telephone numbers for the local emergency service provider and for a qualified service technician. User must place one label next to the alarm. The other label must be placed near a source of fresh air where you plan to gather in the event the alarm indicates propane is presence.*



### **WARNING**

Test Alarm operation after vehicle has been in storage, before each trip, and at least once per week during use.



### **WARNING**

Activation of this device indicates the presence of LP gas, which can cause an explosion and/or fire. This normally indicates a leak in the LP gas piping or an LP gas appliance.

**WARNING:** If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life

#### WHAT TO DO IF YOU SMELL GAS

- Evacuate all persons from vehicle.
- Shut off gas supply at gas container or source.
- Do not touch any electrical switch, or use any phone or radio in

vehicle.

- Do not start vehicle's engine or electric generator.
- Contact nearest gas supplier or qualified Service Technician for repairs.
- If you cannot reach a gas supplier or qualified Service Technician, contact the nearest fire department.
- Do not run on gas supply until gas leak(s) have been repaired.

## **TESTING**

*Note: Unit must be powered for three minutes before test can be performed.*

The Test/Rest button is used to verify proper alarm operation. Executing the test function sounds the alarm and lights up the LED. The test will sound the alarm twice, with 4 "beeps" in 1 second followed by 5 seconds of silence.

By pressing the button, you can verify that the alarm sounds and that the LED functions properly. The alarm is internally monitored while powered to ensure proper operation and to detect faults.

### **Important**

- This detector will only indicate the presence of LP gas at the sensor. Gases may be present in other areas.
- The detector is not suitable as a smoke or fire detector. Not suitable for installation in hazardous locations as defined in the National Electrical Code.

**MODEL DESCRIPTION**

LP=Propane	D=12Vdc	A=120Vac	O=OEM	R=Retail
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OEM Package			Retail Package		
Model	Part No	Color	Model	Part No	Color
LP_DOW	36719	White	LP_DRW	36720	White
LP_DOB	31013	Black	LP_DRB	31014	Black
LP_AOW	36522	White	LP_ARW	36523	White
LP_AOB	31005	Black	LP_ARB	31006	Black
Surface Bracket	35146	Black	Surface Bracket	35147	White
Adapter Plate	35180	Black	Adapter Plate	35181	White

**SPECIFICATIONS**

Gas Detection	LP
Alarm Level:	< 25% of the LEL of propane
Audio Alarm	Min. 85 dB at 10 Feet
Visual Alarm	LED is red and alarm every 5 seconds
Malfunction	LED is yellow and chirp every 30 seconds
Sensor End of Life Alarm	7 years
Dimensions	3.5" H X 2.3" W
Power Supply	12 volts DC
Supply Current (Max)	1A
Current Draw	75 mA

## **POWER CONSERVATION MODE**

Operational Temperature	-35° to 66° C (-31° to 150°F)
Warranty	Limited, 2 year
Alarm Lifetime	7 years ( powered operation)
Standards	ETL tested to UL 1484 Residential and RV

### **For Service and Information Contact**

**Atwood Mobile Products LLC, 1874 South Pioneer Road Salt Lake City, Utah  
84104-4226**

**Consumer Service Department, 1120 North Main, Elkhart, IN 46514  
USA. Phone: 866-869-3118**

### **ALARM OPERATION**

The alarm includes an LED indicator, an audible alarm, and one Test/Reset button provide interaction and feedback with your alarm and allow you to troubleshoot your alarm and to determine the proper actions to take. The alarm operates in seven separate modes that will be identified in this section.

#### **Power Off Mode**

This mode indicates that there is insufficient power provided to the alarm. The LED and button will not function in this mode. Sufficient power must be provided to the alarm to exit this mode.

#### **Normal Stand-by Mode**

This mode indicates that a gas concentration is continuously monitored. It also indicates that a gas concentration is at a safe level. In this mode the LED indicator will be Green. The Test function for the Test/Reset button will be active.



### **Alarm Mode**

This mode indicates that a gas concentration has achieved unsafe levels. In this mode the LED will be Red. The LP concentration is unsafe the Propane indicator will be lit. In this mode the audible indicator will signal an alarm, and the Reset function of the Test/Reset button will be active. This mode will be exited automatically when LP concentrations fall below 500 ppm for greater than 10 seconds.

### **Test Mode**

This mode indicates that the Test function of the Test/Reset button was initiated. In this mode, the LED will be Red, and the audible indicator will signal an alarm. The test/Rest button will not function during this mode. This mode will be exited automatically within 10 seconds.

### **Silence / Stabilization Mode**

This mode indicates that the alarm is stabilizing for the first 3 minutes after power-up or after the Reset Function was initiated. In this mode the LED will be flashing Red. The audible and the Test/Reset button function will be off. This mode will be exited after 3 minutes. If gas concentrations are still high after the 3 minutes, the previous alarm will reactivate.

### **Fault Mode**

This mode indicates that a fault has been detected that compromises the alarm function. This mode will be exited automatically when the fault is cleared.

If the fault persists, the alarm is not functioning properly and must be replaced to ensure your safety in the area. During this mode, the LED will be Yellow and the audible alarm will chirp every 30 seconds.

### **End of Life Mode**

The Detector will operate in end-of-life mode after the Detector has been powered for 7 years +/- 128 days. This represents the operating life of the sensor used to detect LP gas. After 7 years, the sensor is no longer reliable and the Detector must be replaced. Once end-of-life mode has been entered, it is permanent, even after a power out cycle. If the reset/test button is pressed during end-of-life mode, the audible alarm will be silenced for 12 hours before being automatically reactivated. The LED will be flashing Yellow. The audible alarm will chirp every 30 seconds.

Note: two self-adhesive emergency contact labels are provided. The user must add telephone numbers for the local emergency service provider and for a qualified service technician. User must place one label next to the alarm. The other label must be placed near a source of fresh air where you plan to gather in the event the alarm indicates propane is present.

## FUNCTIONS

Mode	LED	Audible Alarm
Power Off	Off	Off
Normal Stand by	Green	Off
Alarm	Red	Alarm
Test	Red	Alarm
Silence/Stabilization	Flashing Red	Off
Fault	Yellow	Chirp every 30 seconds
End-Of-Life	Flashing Yellow	Chirp every 30 seconds

**IMPORTANT – If this alarm does not test properly return it immediately for repair or replacement.**

- A flashing LED blinks once every second
  - An audible alarm in “fault state” chirps once every 30 seconds
  - An audible alarm in “alarm state” chirps 4 times every 5 seconds



**CAUTION**

Installation should be performed by a qualified technician

#### **INSTALLATION INSTRUCTIONS**

- LP units when possible should be mounted to detect LP gas closer to the floor due to its heavier than air nature.
- Select a location as close as possible to appliances that could be potential sources of LP gas leaks and where the initial concentration may be greatest. Do not install directly in front of air or furnace vents.
- **DO NOT INSTALL** next to doors or windows that may dilute the concentration of any LP gas presents in the environment and preclude a timely alarm signal.
- **DO NOT INSTALL** the detector in a closet or in a location that could become obstructed by a curtain, hanging clothes or any other objects.
- **DO NOT LOCATE** detector where it could be exposed to splashes of water or grease or where it could be damaged by impact with moving objects (i.e. furniture, feet, etc.).
- **DO NOT INSTALL** on a wall switch controlled by a power line or

ground fault circuit.

- Usually you will find more than one suitable location that will also provide ease of viewing and connection to power.
- Never use detergents or solvents to clean the alarm, chemicals can permanently damage or temporarily contaminate the sensor.
- Avoid spraying air freshener, hair spray, paint or other aerosols near the alarm.
- The following is a list of substances that at high levels can affect the sensor and cause an alarm.

Methane, propane, iso-butane, ethylene, ethanol, alcohol, carbon monoxide, iso-propylene, benzene, toluene, ethyl acetate, hydrogen, hydrogen sulfide, sulfur dioxides.

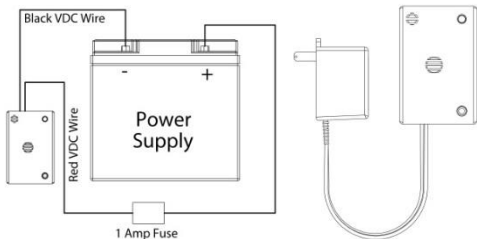


■ Alarm Location for Minimum Protection

## WIRING

Before routing the wires, disconnect the 12 VDC power supply to avoid shorting. Make sure that the power connections are made to a properly fused circuit (15 amp maximum) 1 amp fuse is recommended for single or multiple detector installation. Can be fused through a distribution panel or power supply box.

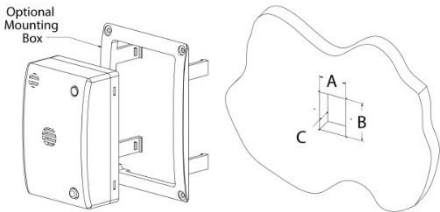
- Connection to a **Master Storage Switch** is acceptable. The alarm will be off along with all other 12 volt equipment when the storage switch is turned to the off position. **DO NOT USE THE RV WHEN THE STORAGE SWITCH IS IN THE OFF POSITION.**
- All connections must be in accordance with the National Electrical Code in the United States and the Canadian Electric Code in Canada. All connections must use approved wiring and connectors of an appropriate size see wiring diagram label. Provide a minimum of 8 square inches to make wiring connection for DC models.



Some models are hard wired with a 110 AC adapter allowing the unit to be plugged directly into a 110 AC wall outlet.

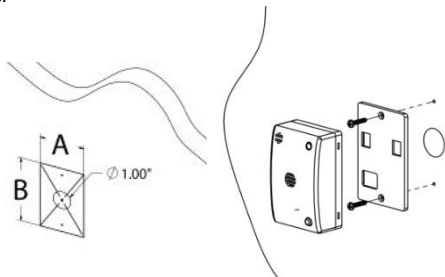
## FLUSH MOUNTING

- A detachable mounting bracket allows the unit to be mounted as a flush installation supplied with the unit.
- Mounting brackets attached to the surface where the alarm is to be mounted with four screws, see instructions below.
- To install the mounting bracket to the alarm place the alarm inside the bracket and snap in place see diagram. To remove flush mounting bracket pull legs away from body of detector.



1. Verify that there is a minimum of (C)1-1/2" inches of free space behind the wall.
2. Mark on the desired mounting surface a box approximately (A) 2-5/8" inch wide by (B) 3-5/8" high and cutout.
3. Route power leads to the opening and connect wire to the detector per the wiring diagrams.
4. Install the detector and excess wiring through the opening until mounting flange is flush to the wall.

Mount the unit using the 4 screws provided one in each corner of the flange.



## **SURFACE MOUNTING**

1. Mark on the desired mounting surface a box approximately 2-1/2" inch wide by 3-3/8" high and draw an X corner to corner to find center and cut a 1" inch hole.
2. Route power leads to the opening and connect wires to the detector per the wiring diagrams.
3. Center and mount the base over the outline done in step 1 with the two screws provided through the two holes in the mounting base.
4. Slip the unit on to the mount tabs of the base and pull down into place.

### **AC Power Adapter Mounting**

Power supply can be plugged into a 120 VAC wall outlet either on the surface or behind a wall in a cabinet if so desired.

1. Cut a hole in the wall large enough to slide the adapter through to the

- outlet. Slide the adapter through the mounting box before screwing the box onto the wall.
2. Follow the steps outlined above for either surface or flush mounting of the alarm.
  3. Adapter wire is run underneath the mounting bracket when installing a flush mounted alarm.

## **OPERATING INSTRUCTIONS**

Applying power to the detector will cause the LED to flash red for 3 minutes and then turn green. Once LED is green, detector is monitoring for LP gas.

## **DETECTOR TEST**

1. Press "TEST" button until alarm sounds; then release the "TEST" button.
2. The detector will sound twice.
3. The LED will turn red, and then return to normal operation and turn green after 8 seconds.
4. This test must be carried out not less than once per week to ensure proper operation of the detector.

## **Lp Gas Detection**

At <25% LEL concentration of LP gas the detector will provide a visual and audible alarm by sounding the buzzer and turning the LED Red. The buzzer may be temporarily silenced by pressing the Test/Reset button. However, until the measured concentration is reduced to a safe level, the alarm will sound again within 3 minutes.

## **POWER MANAGEMENT**

The operating voltage for the detector is 12 VDC. In these conditions, the unit will meet the specifications of the UL 1484 standard. The actual



voltage applied to the detector in a recreational vehicle may drop below the minimum 8 VDC. The Atwood Detector is designed to provide the user with a Low Voltage Warning before reaching that level and to provide additional distinct, clear warnings and alarms after the 8 VDC level is reached. However, if available power supplied to the unit is below the operating voltage of 8 VDC, the detectors will not detect gas or provide you protection against dangerous levels of LP.

The following descriptions of operational modes will provide the user with an understanding of how the detector performs to conserve available battery power and alert the user to non-operating conditions to reduce to battery draw-down.

### **Power Failure**

If no power is applied to the unit or there is a failure of power circuits, there will be no identification from the LED. If there is no indication from the LED, but the audible alarm sounds when the TEST button is pressed, then the LED is defective and the user must contact the Atwood Service Center.



### **WARNING**

Actuation of end of life of alarm indicates the alarm is nonfunctioning and will not detect the presence of LP gases which can **KILL YOU**.

### **END OF LIFE**

Unit is designed to give maximum life of sensors under normal conditions. This is seven years from date of installation of unit. A sticker has been provided to record this information and should be placed next to the unit where it can be viewed. At the end of life the unit will chirps every 30 seconds and the LED's will flash Yellow. This state will continue until unit is

replaced. If the reset/test button is pressed during end-of-life mode, the audible alarm will be silenced for 12 hours before being reactivated. The LED will remain flashing Yellow while the audible alarm is silenced for this period, at the end of the 12 hours the audible alarm will be turned on and the alarm will remain on and can't be silenced. The alarm in this condition will not sense LP gas. **YOU MUST REPLACE ALARM** it is not field repairable.

## **WARRANTY**

### **Atwood Mobile Products LLC LIMITED WARRANTY**

Atwood Mobile Products, LLC warrants to the original owner and subject to the below mentioned conditions, that this hydro flame™ product will be free of defects in material or workmanship for a period of two years from the original date of purchase. Atwood's liability hereunder is limited to the replacement of the product, repair of the product, or replacement of the product with a reconditioned product at the discretion of the manufacturer. This warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other cause not arising from defects in material workmanship. This warranty extends to the original owner of the product only and is subject to the following conditions:

1. For two years from the date of purchase, Atwood will repair or replace any part defective in material or workmanship. This warranty includes reasonable labor charges required to remove and replace the part. Service calls to customer's location are not considered part of these charges and are, therefore, the responsibility of the owner.
2. In the event of a warranty claim, the owner must contact, in advance, either an authorized Atwood Service Center or the Atwood Service Department. Warranty claim service must be performed at an

- authorized Atwood Service Center (a list will be provided at no charge) or an approved by the Consumer Service Department, 1120 North Main, Elkhart, IN 46514 USA. Phone: 1-866-869-3118.
3. RETURN PARTS MUST BE SHIPPED TO ATWOOD "PREPAID". Credit for shipping costs will be included with the warranty claim. The defective parts become the property of Atwood Mobile Products, LLC and must be returned to the Atwood Mobile Products, Quality Assurance Dept., Salt Lake City, Operations 1874 South Pioneer Road, Salt Lake City, Utah 84104 USA.
  4. This warranty applies only if the unit is installed according to the installation instructions provided and complies with local and state codes.
  5. The warranty period on replacement parts is the unused portion of the original warranty period.
  6. Damage or failure resulting from misuse (including failure to seek proper repair service). Misapplication, alternations, water damage, freezing or not using genuine Atwood parts are the owner's responsibility.
  7. Atwood does not assume responsibility for any loss of use of vehicle, loss of time, inconvenience, expense for gasoline, telephone, travel, lodging, loss or damage to personal property or revenues. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.
  8. Any implied warranties are limited to (2) two years. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.
  9. Replacement parts purchased outside of the original furnace warranty

carry a 90 day warranty. This includes the part at no charge and reasonable labor charges to replace it.

This Gas Detector is designed for use in recreation vehicles for warning of LP gas. Any other use, unless authorized in writing by the Atwood Engineering Department, voids this warranty.