



MPD 37972

hydro flame™

Atwood Mobile Products
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INTERNET: http://www.atwoodmobile.com



7900-II, 8000-II, 8500-IV, 8900-III
2-Stage Series Furnace

User's Information Manual

ENGLISH, FRANCAIS (et Canada)

•Operation •Maintenance

Effective 7/01/00

This furnace design has been certified by the American Gas Association and Canadian Gas Association for installation in recreation vehicles as a MSP Category III furnace.

Location and phone numbers of qualified Service Centers can be found at our website http://www.atwoodmobile.com or call 815-877-5700 to have a Service Center List mailed.

FOR YOUR SAFETY READ BEFORE OPERATING

BEFORE OPERATING FURNACE, smell all around appliance area for gas. Be sure to smell next to floor because some gas is heavier than air and will settle on floor.

This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. DO NOT try to light the burner by hand.

Use only your hand to turn a gas control valve. Never use tools. If the valve will not turn by hand, don't try to repair it, call a qualified Service Technician. Force or attempted repair may result in a fire or explosion.

Do not use this appliance if any part has been under water. Immediately call a qualified Service Technician to inspect the appliance and to replace any part of control system and any gas control which has been under water.



WARNING
FIRE OR EXPLOSION

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

- DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

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 nearest fire department.
• DO NOT turn on gas supply until gas leak(s) has been repaired.

- Installation and service must be performed by a qualified Service Technician, Service Center or gas supplier.

FOR YOUR SAFETY

READ ALL INFORMATION BEFORE OPERATING FURNACE

Installer: Provide this instruction to the consumer.

Consumer: Keep document for future reference.

For complete instructions on lighting and shutting down furnace see booklet attached to furnace.

OPERATING INSTRUCTIONS

1. STOP! Read all safety information.
2. Set thermostat to lowest setting.
3. Turn off electric power to furnace.
4. This furnace is equipped with an ignition device which automatically lights burner. DO NOT try to light burner with a flame.
5. Open furnace exterior door.
6. Turn switch or circuit breaker to OFF.
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near floor. If you smell gas, STOP! Follow WHAT TO DO IF YOU SMELL GAS in safety information. If you don't smell gas, go to next step.
8. Turn ON circuit breaker or switch.
9. Close furnace exterior door.
10. Turn on electric power to furnace.
11. Set the thermostat to desired setting.
12. If furnace does not operate, follow instructions HOW TO TURN OFF ELECTRICAL POWER TO FURNACE GAS VALVE and call an authorized Service Technician.

HOW TO
TURN OFF ELECTRICAL POWER



1. Set the thermostat at the lowest setting.
2. Open furnace exterior door and turn OFF electric switch or circuit breaker.
3. Close furnace exterior door.

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

WARNING

CARBON MONOXIDE POISONING / FIRE / EXPLOSION

- A qualified Service Technician must install, repair or perform preventive maintenance on furnace.
- DO NOT modify this furnace.
- Follow the information in this instruction exactly.

Location and phone numbers of qualified Service Centers can be found at our website <http://www.atwoodmobile.com> or call 815-877-5700 to have a Service Center List mailed.

FIRST TIME USE OF FURNACE

WARNING **HARMFUL FUMES**

- Open all windows and doors allowing the fumes to fully dissipate to the outside.

First time use of the furnace may circulate fumes caused by the heating of materials used in the furnace manufacturing process. These fumes may cause physical irritation in some persons.

First time heating of some building materials in the coach can also give off fumes that can be fatal to birds or other small animals and may be harmful to humans.

AIR VENTILATION

WARNING **CARBON MONOXIDE POISONING**

- Door must be properly sealed and draft cap must be adjusted correctly to prevent carbon monoxide from entering coach.
- Combustion air must NOT be drawn from the living area.
- DO NOT vent exhaust into living area or outside enclosed porch area.
- DO NOT vent any other appliance with venting system serving the furnace.
- DO NOT allow snow or any objects to block exhaust system of furnace.

CAUTION **PRODUCT DAMAGE**

- DO NOT allow flue gas exhaust to have extended contact with exterior sidewall of recreation vehicle. It will cause the material to degrade over time.

Exhaust tube and furnace chamber tube must overlap no less than 1-1/4" and be positioned against the door screen for proper function.

PROPANE (LP) & NATURAL (NAT) GAS FURNACE IDENTIFICATION AND CONVERSION

WARNING **FIRE OR EXPLOSION**

- Use the correct gas specified for your furnace.
- Only a qualified Service Technician may convert a 8900 series furnace from LP to NAT or NAT to LP.

All models, except the 8900 AC-III Series, are designed for LP GAS ONLY and cannot be converted to natural gas. To verify the setting of your furnace, open furnace door and check the model number on the label (SEE TABLE BELOW). Use only the type of gas your furnace has been set for. ONLY the 8900 AC-III series can be converted-by a qualified Service Technician-to use either Propane (LP) or Natural (NAT) gas.

MODEL	GAS TYPE	MODEL	GAS TYPE
ALL 7900-II	LP ONLY	8900 DC-III	LP ONLY
ALL 8000-II	LP ONLY	8935 ACLC-III	LP OR NAT
ALL 8500-IV	LP ONLY	8940 ACLC-III	LP OR NAT
ALL 2-STAGE	LP ONLY		

REFUELING RECREATION VEHICLE AND LP TANKS

WARNING **FIRE OR EXPLOSION**

- DO NOT refuel gasoline tanks or LP tanks unless the gas has been turned OFF AT THE LP TANK disabling all gas appliances and pilot lights.
- DO NOT over fill LP gas tanks.
- LP tanks must be filled by a qualified gas supplier only.

Follow tank manufacturer's operating instructions located on tank. Liquid gas from an over filled tank can be forced through the pressure regulator resulting in high pressure gas escaping, causing fire/explosion.

WHEN YOUR RECREATION VEHICLE IS IN MOTION

WARNING **FIRE OR EXPLOSION**

- Turn gas OFF AT THE LP TANK when vehicle is in motion. This disables all gas appliances and pilot lights.

HOT SURFACE

CAUTION **BURN INJURY**

- DO NOT touch exterior exhaust grille, when furnace is operating.
- Supervise young children in the same room as the furnace.

MATERIAL NEAR FURNACE

WARNING **FIRE OR EXPLOSION**

- DO NOT store or use gasoline or other flammable vapors and/or liquids in the vicinity of this or any other appliance.
- DO NOT use the furnace cabinet area as a storage compartment.
- DO NOT block furnace outlet registers or return air grille.
- DO NOT block furnace outlet registers or return air grille.
- Keep all insulating material away from furnace.

POWER TO FURNACE



WARNING FIRE OR EXPLOSION

- DO NOT alter the furnace to a positive grounding system.
- DO NOT use battery charger to supply power to DC model furnace even when testing.
- DO NOT use 120 volt AC current with DC models.

WATER DAMAGE TO FURNACE



WARNING FIRE OR EXPLOSION

- Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the furnace before shutting off the electrical supply.
- DO NOT use furnace if any part has been under water.

Immediately call a qualified Service Technician to inspect the furnace and replace any part of control system and any gas control which has been under water.

FOR BEST FURNACE PERFORMANCE



WARNING CARBON MONOXIDE POISONING / FIRE / EXPLOSION

- Installation, repairs and preventive maintenance should be done by a qualified Service Technician only.
- The furnace should be inspected before use at least annually by a qualified Service Technician.
- Frequent cleaning may be required due to excessive lint from carpeting, bedding material, pet hair, etc. It is imperative that control compartments, burners and circulating air passageways of the furnace be kept clean.
- DO NOT block or obstruct return air passages or outlet registers to the furnace.

LOCATION AND PHONE NUMBERS QUALIFIED SERVICE CENTERS

- website <http://www.atwoodmobile.com>
- call 815-877-5700 for a Atwood Service Center List

ANNUAL PREVENTIVE MAINTENANCE INSPECTION

A qualified RV service technician should perform the following preventive maintenance and safety checks ANNUALLY.

Failure to properly maintain the furnace may void the furnace warranty and can result in unsafe furnace operation. Preventive maintenance is not covered under warranty.

AIR WHEELClean and clear any obstructions. Operating furnace with any obstruction in the blower will damage wheel making replacement necessary.

BURNERRequires no adjustments, inspect annually. Burner should be cleaned with a wire brush to remove debris and corrosion build up.

COMBUSTION CHAMBER ..Check air intake and flue areas for internal obstructions (wasp or bird nests, etc.). To clean obstructions - **REMOVE THE COMBUSTION CHAMBER**, flush with water and completely dry before replacing. Replace combustion chamber if any cracks or holes are found this condition is not field repairable.

CONTROL COMPARTMENTRemove dirt and lint.

DUCTINGMust be clean and clear of obstructions. Reconnect any ducts that have become loose.

GAS PRESSURE TESTUsing a U-tube Water Manometer the entire piping system must be maintained within a range of 10-14" W.C. when all appliances are in operation. Test the gas connections for leakage with a leak test solution.

GAS SUPPLY SYSTEMTo test for gas leaks, perform a pressure-drop test according to current ANSI standards

GASKETSInspect all gaskets for tight seals. DO NOT reuse gaskets - always replace with new. Worn seals may allow carbon monoxide to enter the living areas and cause illness or death.

GENERALPhysical support system must be sound, without sagging, cracks gaps, etc.

MOTORRequires no oiling. Permanently sealed and lubricated.

RETURN AIRMust be clean and clear of obstructions.

VENTINGExhaust tube and furnace chamber tube must overlap no less than 1-1/4" and be positioned against the door screen for proper function.

VOLTAGELow voltage can cause furnace to overheat and cycle. High voltage can cause unbalanced combustion and excessive motor wear. DC voltage = 10.5 - 13.5 VDC at the furnace during operation. Check power with applicable power sources (generator, battery and converter).

WIRE CONNECTIONSCheck for loose or disconnected wires.

ATWOOD MOBILE PRODUCTS

hydro flame® FURNACE LIMITED WARRANTY

Atwood Mobile Products warrants to the original consumer purchaser 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 causes 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. This warranty does not cover the following items classified as normal maintenance:
 - ADJUSTING - gas pressure, voltage, loose wire connections, and/or thermostat heat anticipator
 - CLEANING - air wheels, burner and/or burner orifice
 - CLEANING OR ADJUSTING - heat chamber, heat ducting, return air opening, and/or exhaust tubes
3. 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 as approved by the Consumer Service Department, Atwood Mobile Products, 4750 Hiawatha Drive, Rockford, IL 61103-1298 USA.
Phone: 815-877-5700
4. 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 and must be returned to the Quality Assurance Dept., Salt Lake City Operations, 1874 South Pioneer Road, Salt Lake City, Utah 84104 USA.
5. This warranty applies only if the unit is installed according to the installation instructions provided and complies with local and state codes.
6. The warranty period on replacement parts is the unused portion of the original warranty period.
7. Damage or failure resulting from misuse (including failure to seek proper repair service), misapplication, alterations, water damage, freezing or not using genuine Atwood parts are the owner's responsibility.
8. 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.
9. 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.
10. 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 *hydro flame* furnace is designed for use in recreation vehicles for the purpose of heating air as stated in the "data plate" attached to furnace. Any other use, unless authorized in writing by the Atwood Engineering Department, voids this warranty.

GARANTIE LIMITÉE DES APPAREILS DE CHAUFFAGE À AIR CHAUD ATWOOD

Atwood Mobile Products garantit ce produit à l'acheteur initial, et suivant les termes stipulés ci-dessous, contre tout défaut de matériel ou de fabrication pendant une période de deux ans à compter de la date d'achat. La responsabilité d'Atwood sous cette garantie est limitée au remplacement du produit, à la réparation du produit ou au remplacement du produit par un produit remis à neuf, à la discrétion du fabricant. La garantie est nulle si le produit a été endommagé par un accident, une utilisation abusive, une négligence, une altération ou toutes autres causes dont n'est à l'origine ni un défaut de matériel, ni un défaut de fabrication. Seul l'acheteur initial bénéficie de la garantie, qui est valable sous réserve des conditions suivantes :

1. Pendant une période de deux ans à partir de la date d'achat, Atwood réparera ou remplacera toute pièce qui présenterait un défaut de matière ou de fabrication. Cette garantie inclut les frais de main d'œuvre encourus pour le démontage et le remplacement de la pièce, dans des limites raisonnables. Les visites de réparateur chez l'utilisateur ne font pas partie de ce type de frais et, par conséquent, sont à la charge de l'utilisateur.
2. Cette garantie ne couvre pas les opérations suivantes, qui font partie de la maintenance normale :
 - RÉGLAGE - pression du gaz, tension, mauvaises connexions électriques et/ou anticipateur de chaleur du thermostat
 - NETTOYAGE - roues à air, brûleur et/ou lumière du brûleur
 - NETTOYAGE OU RÉGLAGE - chambre de chauffe, système de distribution de la chaleur, ouverture de reprise d'air et/ou conduits d'évacuation
3. En cas de demande d'application de la garantie, le propriétaire doit contacter à l'avance un Centre technique Atwood agréé ou le Service après-vente d'Atwood. Les réparations couvertes par la garantie doivent être effectuées par un Centre technique Atwood agréé (une liste vous sera fournie gratuitement) ou avec l'approbation du Service après-vente : Consumer Service Department, Atwood Mobile Products, 4750 Hiawatha Drive, Rockford, IL 61103-1298, États-Unis.
Téléphone : +1 815 877-5700.
4. LES PIÈCES RENVOYÉES DOIVENT ÊTRE EXPÉDIÉES À ATWOOD, FRET PAYÉ D'AVANCE. Le montant des frais d'expédition sera ajouté au remboursement des pièces couvertes par la garantie. Les pièces défectueuses deviennent la propriété d'Atwood Mobile Products et doivent être renvoyées au Service d'assurance qualité : Quality Assurance Dept., Salt Lake City Operations, 1874 South Pioneer Road, Salt Lake City, Utah 84104, États-Unis.
5. La présente garantie est uniquement valable si l'appareil est installé conformément aux instructions d'installation fournies, ainsi qu'aux codes locaux et aux codes de l'État.
6. La période de garantie sur les pièces de remplacement est égale à la durée non utilisée de la période de garantie d'origine.
7. Les dommages ou les défaillances entraînés par une utilisation abusive (dont la négligence de rechercher un service de réparation compétent), une mauvaise application, des modifications, des dommages causés par l'eau, le gel ou l'utilisation de pièces autres que les pièces Atwood, sont à la charge du propriétaire.
8. Atwood n'assume aucune responsabilité en cas de perte de jouissance d'un véhicule, perte de temps, préjudice secondaire, frais d'essence, de téléphone, de déplacement ou d'hébergement, perte ou dommage de biens personnels et manque à gagner. Certains États n'autorisent pas l'exclusion ou la limitation des dommages consécutifs ou indirects. Par conséquent, les limitations et exclusions ci-dessus peuvent ne pas s'appliquer à votre cas.
9. Toutes garanties implicites sont limitées à (2) deux ans. Certains États n'autorisent pas les limitations sur la durée des garanties implicites. Par conséquent, la limitation ci-dessus peut ne pas s'appliquer à votre cas. La présente garantie vous confère des garanties juridiques spécifiques et vous pouvez également jouir d'autres droits qui varient d'un État à l'autre.
10. Les pièces de remplacement achetées en dehors de la garantie d'origine de l'appareil de chauffage à air chaud sont garanties pendant 90 jours. Cette garantie couvre le prix de la pièce et, dans des limites raisonnables, les frais de main d'œuvre encourus lors de son remplacement.

Cet appareil de chauffage à air chaud Atwood est conçu pour être utilisé dans les véhicules de plaisance, afin de chauffer l'air, selon la description qui figure sur la « plaque de données » fixée à l'appareil de chauffage à air chaud. Toute autre utilisation, à moins qu'elle ne soit autorisée par écrit par le Service ingénierie Atwood, annule la présente garantie.

Manual provided courtesy
Bryant RV Services
www.byantrv.com

All manuals are believed to be released for distribution, and/or in the public domain.

Service manuals provided with the understanding that persons using them are well versed in proper safety practices, and are familiar with basic safety procedures, including, but not limited to safety procedures dealing with 120 volt electricity, high amperage 12 volt circuits an LPG (propane) systems.

If in doubt, consult a professional (better safe than sorry).