The Project Gutenberg eBook of Installation and Operation Instructions For Custom Mark III CP Series Oil Fired Unit

This ebook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this ebook or online at www.gutenberg.org. If you are not located in the United States, you'll have to check the laws of the country where you are located before using this eBook.

Title: Installation and Operation Instructions For Custom Mark III CP Series Oil Fired Unit

Author: Anonymous

Release date: February 25, 2009 [eBook #28166]

Language: English

Credits: Produced by Gerard Arthus, Diane Monico, and the Online Distributed Proofreading Team at http://www.pgdp.net

*** START OF THE PROJECT GUTENBERG EBOOK INSTALLATION AND OPERATION INSTRUCTIONS FOR CUSTOM MARK III CP SERIES OIL FIRED UNIT ***

INSTALLATION AND Operation Instructions

FOR

CUSTOM MARK III CP SERIES OIL FIRED UNIT

MANUFACTURED BY

AXEMAN-ANDERSON COMPANY 300 East Mountain Avenue South Williamsport, PA 17701

CPO2O-8410-5C

[Pg 1]

INSTALLATION AND OPERATING INSTRUCTIONS CUSTOM MARK III CP SERIES OIL FIRED UNIT

GENERAL

The Custom Mark III CP Series Oil Fired Unit is a high quality heating unit that will provide many years of comfortable and economical heat if properly installed and given proper care. It is

IMPORTANT therefore that these instructions should be followed carefully.

SHIPMENT

The unit is completely assembled at the factory except for the following parts which are packed in a separate carton and strapped to the skids inside the shipping carton:

- 1 3/4" × Close Steel Nipple
- $1 3/4" \times 3/4" \times 1/2"$ Tee
- 1 Fig. 105 Tridicator
- 1 3/4" No. 10-402-05 ASME Relief Valve
- 1 3/4" No. 600-19 Boiler Drain
- 1 T87F-2055 Thermostat

The jacket extension for 128CPO is shipped in separate carton.

DAMAGE IN TRANSIT

Upon receipt of shipment of this material, inspect all cartons for external damage. If external damage is noted, open the carton and inspect for damage to equipment. Mark the number of cartons received in this condition on the delivering carrier's waybill, and request the services of their inspector.

If, upon opening a carton, concealed damage is discovered, open the entire shipment and note all equipment so damaged. Contact the delivering carrier and request inspection of the damaged equipment. Do not destroy the carton. The inspector from the freight company will need this to determine reason for damage.

Normally claims for any and all damages should be filed with the freight company within five working days after receipt of shipment.

All materials are sold F.O.B. Factory. It is the responsibility of the consignee to file claim with the delivering carrier for material received in a damaged condition.

LOCATING UNIT

BEFORE REMOVING SHIPPING CARTON, LOCATE UNIT IN ITS FINAL POSITION

The carton is plainly marked so as to indicate which is the outlet burner end of the unit which is also the end where the return and flue are located. Clearance should be provided in both the front and rear of the unit for cleaning. Where possible it is good practice to locate the unit so its sides are parallel to the chimney flue. In all instances locate unit as near chimney flue as possible in order to avoid use of a long flue pipe.

[Pg 2]

REMOVING CARTON

Once the packaged unit is in its proper place, cut all around the carton on the scored line as shown on carton. The entire carton may then be lifted from the skids.

If it is found necessary to move the unit a little more to place it in the exact location ready for piping, do so before removing skids.

DO NOT PUSH AGAINST ANY PART OF JACKET OR OIL BURNER WHEN MOVING UNIT. TO MOVE UNIT, PUSH AGAINST <u>SKIDS</u>, <u>FLUE BOX OR SMOKE BOX</u>. PUSHING AGAINST JACKET WILL RESULT IN DAMAGE.

REMOVING SKIDS

The skids are specially designed for easy removal. It is necessary, however, to follow these instructions carefully.

- A. After unit is in proper place, remove the two cross pieces from skids by pulling out all scaffolding (double headed) nails.
- B. By inserting pinch bar or $2" \times 4"$ underneath the smoke box (rear of unit), tilt one side of unit just high enough to lift lugs out of holes in skid, then knock skid out from underneath unit. Then do the same thing on the other side of unit. THE UNIT IS NOT BOLTED TO THE SKIDS. The 3/4" lugs welded to the unit simply fit into the 3/4" holes in the skids.

IMPORTANT

DO NOT TILT UNIT BY PUSHING AGAINST JACKET

IT IS NOT NECESSARY

AND BY DOING SO THE JACKET WILL BE DAMAGED

LEVELING UNIT

In case floor is uneven, unit may easily be made level by inserting shims under the 4 shipping lugs. These lugs also keep the jacket 1/2" off the floor, protecting it from wet floors and dampness.

PIPING AND WIRING

Once the unit is in its proper location with the packing carton, skids and packing material removed, it is ready for piping and connection from Room Thermostat and 110 V. 60 Cy. A.C. Current.

CONTROL SYSTEM

The controls furnished are for a one zone Forced Water System consisting of T87F Room Thermostat, L8124A-1007 Triple Acting Aquastat and Circulator Relay, C554A-1018 Cadmium Photocell, R8184G-1005 Burner Relay and V4046A-1009 Oil Valve. Description and complete wiring diagram will be found packed with each control.

[Pg 3]

SPECIAL CONTROL SYSTEMS

For special control systems such as multiple installations, zone controlled, unit heater, radiant panel, etc., write to factory for wiring diagrams.

CHIMNEY AND BREECHING REQUIREMENTS

The CP boiler should be connected to a vertical vent system that will prevent: (1) positive pressure in the flue, (2) backward flow of flue gas through the unit when the burner stops, and (3) condensation in the flue.

Use double-walled or insulated pipe for sections of the flue in cold areas. All outside vents, except for short extensions, must be insulated to avoid condensation in the flue. Several types of prefabricated chimneys are available providing double-walled or insulated pipe, some with ceramic and others with metallic liners.

While the unit is equipped with an induced draft fan, proper size vent must be provided to remove the gases of combustion. It is recommended that a 4" to 5" increaser be used for venting the 87CPO and 108CPO and a 4" to 6" increaser be used for the 128CPO. For abnormal runs (exceeding 10 ft.), consult factory.

Vent and breeching must be gas tight by sealing with asbestos or thermo-setting pressure sensitive tape.

DRAFT REGULATOR

It is recommended that a draft regulator be installed in chimney flue <u>just below the flue pipe opening</u>, if the unit is attached to an extremely high chimney; an unlined chimney; or a chimney which is constructed on the exterior of the house.

CONTROLS AND TRIM

Controls are installed in place at the Factory. Attach thermo-altimeter in 1/2" tapping in top front of boiler. Install 3/4" \times close nipple in 3/4" top connection with 3/4" \times 3/4" \times 1/2" Tee. 3/4" Tee opening for installation of the relief valve and 1/2" opening for expansion tank.

WIRING

Controls are all in place and wired at the factory except connection to circulator.

REGULATING OIL PRESSURE

Standard nozzles furnished with the burner will produce the stamped rated capacity when used with Commercial Standard No. 2 Fuel Oil, and operated with a pressure of 100 lbs. per square inch. The standard setting of the fuel unit is 100 lbs. Due to difference in tank elevations, the pressure should be adjusted at the time of start up.

FUEL LINES

Care should be employed when attaching the oil lines to the fuel unit. Overtightening or twisting will twist the pump-motor mounting plate and put a stress on the motor bearings.

START UP PROCEDURE

[Pg 4]

General:

- 1. Make certain that correct voltage has been supplied to motor and control circuit.
- 2. Insure that outside air openings are provided in the boiler room for ventilation, and for admission of air for combustion. The free area of such openings should not be less than 7 square inch opening per 100,000 Btuh burner input, or more as required by local codes.
- 3. Check to see that flue, wiring and water level are in order.
- 4. Start burner fan motor to prime pump. If pump does not pick up oil within a few minutes,

prime the pump with lubricating oil. Do not allow pump to run more than a few minutes without additional lubrication.

- 5. Check oil pressure and adjust if necessary. (See REGULATING OIL PRESSURE).
- 6. Set air shutters. (See ADJUSTING BURNER) Refer to Figure 1.
- 7. Generously lubricate the front motor bearing with SAE #20 oil.

ADJUSTING BURNER (See Figure 1)

Positioning of the nozzle in relation to the face of the cone and the electrodes in relation to the nozzle are very important, also the face of the cone in relation to the face of the choke ring must be set according to the chart for each rate.

If the air shutter openings are too large the oil may not ignite.

- 1. This setting will vary somewhat depending upon the grade of oil being used or if No. 1 is used instead of No. 2.
- 2. The approximate burner air setting may be determined by observing the fire through the observation port on the front of the boiler. If the flame is smoky, the air shutter should be opened until the fire burns clean, without any trace of smoke. The flame should be bright yellow in color with the tips of the flame turning orange. If the flame is too white, reduce the amount of air admitted; and, if too red or smoky increase the air.
- 3. Final adjustments should be made using a flue gas analyzer to measure the CO_2 content of the flue gas and a Bacharach model smoke meter or equivalent to determine the amount of smoke (not to exceed a "TRACE").

For checking efficiency only the stack temperature and CO_2 may be taken immediately after the fan and refer to the standard efficiency charts for the results. Readings of 5 to 8% taken after the fan correspond to 10 to 12% taken in the rear uptake of the boiler.

The reduction in CO_2 reading in the flue is caused by the air being drawn in around the motor shaft for cooling purposes. The motor cooling air is at ambient temperature and, therefore, does not add energy to or subtract energy from the flue gas analysis, it only adds volume to the flue gas. Therefore, applying this data to standard efficiency charts will give a true indication of flue gas loss.

[Pg 5]

NOTE

Final adjustment should be made after the burner has been firing continuously for at least 10 minutes, as the fan pulls less air when the flue gases are hot.

A. CHECK LIMIT CONTROL

Run the burner long enough to bring the water temperature up to at least 190 degrees then turn the limit control setting until the burner stops.

NOTE

The Minimum limit setting for any hot water boiler should be 140 degrees F. in order to prevent corrosion of the flues on the fire side. The burner should be run with the primary control thermostat terminals jumpered and the burner controlled directly from an aquastat keeping the boiler hot all the time, thus eliminating the sweating of the flues on the fire side caused by starting from a cold start.

BELT ADJUSTMENT

The proper tension on the fuel unit belt drive is set at the factory. However, the belt should be checked periodically to see that the setting is maintained. To check setting, first, remove the belt guard and then, using fingers, compress the belt at a point midway between the sheaves. The proper setting at this point measured between the outer edges of the belt, should be between 1-3/4" and 1-7/8". If adjustment is necessary loosen the two mounting bolts, and move the fuel unit up or down to give the necessary belt setting. Then re-tighten the mounting bolts securely and replace the belt guard.

PERFORMANCE CHECK LIST

Answers:

- 1. Nozzles
- 2. Flame Impingement
- 3. Firing Head
- 4. Leaks
- 5. Improper Burner Settings
- 6. Lack of Normal Maintenance
- 7. Poor Ignition
- 8. Retention Ring Cokes

Definitions of Answers:

- 1. Nozzles
 - A. Dirty
 - B. Wrong type of nozzle, or manufacturing defect
- 2. Flame Impingement
 - A. High CO₂
 - B. Diffuser and choke ring clearance not uniform
 - C. Dirty nozzle, or poor patterns
 - D. Leaks
- 3. Firing Head
 - A. Diffuser and choke ring clearance not uniform
 - B. Diffuser and choke ring face dimension out of tolerance. (See A Dimension, Figure 1)
 - C. Dirty fuel systems
- 4. Leaks
 - A. Induced fan gasket, or burner gasket improperly sealed
 - B. Front cover assembly improperly installed or sealed
- 5. Improper Burner Settings
 - A. Unit not checked out completely by the serviceman
 - B. Flame pattern erratic (Not concentric). Burner set up by ${\rm CO_2}$ only (Burner should be set up by ${\rm CO_2}$, smoke and visual observation.)
- 6. Lack of Normal Maintenance
 - A. Self explanatory (Recognition of the advantages of preventive maintenance).
- 7. Poor Ignition
 - A. No delay in oil valve, unit flutters on start up.
 - B. Electrodes out of position
 - C. Too much combustion air (Air shutter open too wide)
- 8. Retention Ring Cokes
 - A. Defective nozzle
 - B. Cone, choke and nozzle out of adjustment (See Figure 1)
 - C. Fluttering starts

DOMESTIC HOT WATER

In order to obtain the rated capacity of the instantaneous domestic hot water coil limit control should be set to maintain 200° F boiler water temperature.

Flow regulator and tempering valve should be installed on all instantaneous domestic hot water coil systems.

BURNER SETTING [Pg 7]

The burner is adjusted at the factory before shipment but in case of improper operation at some future date Figure 1 will show proper setting. In all cases the flame retention ring should be concentric with the choke.

[Pg 6]

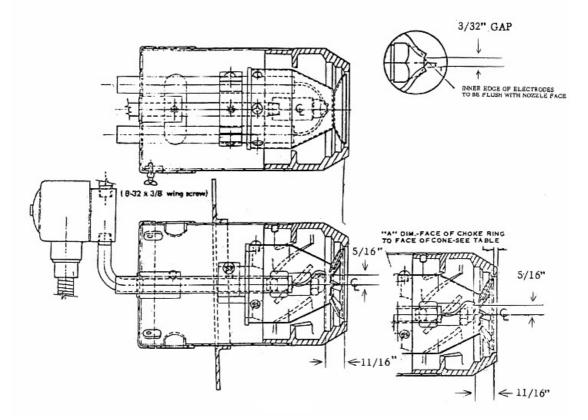
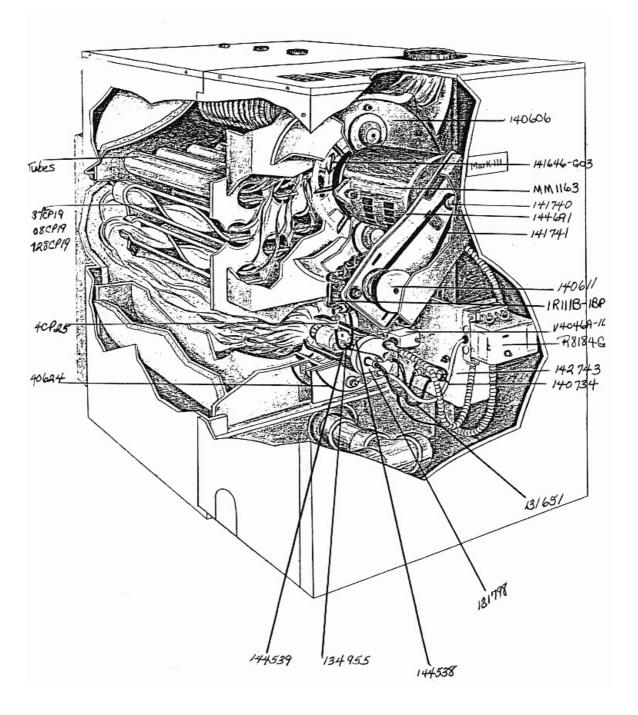


FIGURE 1

MODEL NOZZLE CHOKE RING "A" I. D. NO. DELAVAN SIZE NO. & DIAMETER DIM. VANES 87CPO 1.25 GPH 70° A 142640-002 2-5/8 D FLUSH 2-25/32 108CPO 1.65 GPH 60° A 142641 2-31/32 D -3/16" 2-25/32 128CPO 2.00 GPH 70° A 142641-003 2-31/32 D +1/4" 2-29/32



*** END OF THE PROJECT GUTENBERG EBOOK INSTALLATION AND OPERATION INSTRUCTIONS FOR CUSTOM MARK III CP SERIES OIL FIRED UNIT ***

Updated editions will replace the previous one—the old editions will be renamed.

Creating the works from print editions not protected by U.S. copyright law means that no one owns a United States copyright in these works, so the Foundation (and you!) can copy and distribute it in the United States without permission and without paying copyright royalties. Special rules, set forth in the General Terms of Use part of this license, apply to copying and distributing Project Gutenberg™ electronic works to protect the PROJECT GUTENBERG™ concept and trademark. Project Gutenberg is a registered trademark, and may not be used if you charge for an eBook, except by following the terms of the trademark license, including paying royalties for use of the Project Gutenberg trademark. If you do not charge anything for copies of this eBook, complying with the trademark license is very easy. You may use this eBook for nearly any purpose such as creation of derivative works, reports, performances and research. Project Gutenberg eBooks may be modified and printed and given away—you may do practically ANYTHING in the United States with eBooks not protected by U.S. copyright law. Redistribution is subject to the trademark license, especially commercial redistribution.

START: FULL LICENSE THE FULL PROJECT GUTENBERG LICENSE PLEASE READ THIS BEFORE YOU DISTRIBUTE OR USE THIS WORK

To protect the Project Gutenberg $^{\text{TM}}$ mission of promoting the free distribution of electronic works, by using or distributing this work (or any other work associated in any way with the

phrase "Project Gutenberg"), you agree to comply with all the terms of the Full Project Gutenberg^m License available with this file or online at www.gutenberg.org/license.

Section 1. General Terms of Use and Redistributing Project Gutenberg™ electronic works

- 1.A. By reading or using any part of this Project Gutenberg^{$^{\text{TM}}$} electronic work, you indicate that you have read, understand, agree to and accept all the terms of this license and intellectual property (trademark/copyright) agreement. If you do not agree to abide by all the terms of this agreement, you must cease using and return or destroy all copies of Project Gutenberg^{$^{\text{TM}}$} electronic works in your possession. If you paid a fee for obtaining a copy of or access to a Project Gutenberg^{$^{\text{TM}}$} electronic work and you do not agree to be bound by the terms of this agreement, you may obtain a refund from the person or entity to whom you paid the fee as set forth in paragraph 1.E.8.
- 1.B. "Project Gutenberg" is a registered trademark. It may only be used on or associated in any way with an electronic work by people who agree to be bound by the terms of this agreement. There are a few things that you can do with most Project Gutenberg^{TM} electronic works even without complying with the full terms of this agreement. See paragraph 1.C below. There are a lot of things you can do with Project Gutenberg^{TM} electronic works if you follow the terms of this agreement and help preserve free future access to Project Gutenberg^{TM} electronic works. See paragraph 1.E below.
- 1.C. The Project Gutenberg Literary Archive Foundation ("the Foundation" or PGLAF), owns a compilation copyright in the collection of Project GutenbergTM electronic works. Nearly all the individual works in the collection are in the public domain in the United States. If an individual work is unprotected by copyright law in the United States and you are located in the United States, we do not claim a right to prevent you from copying, distributing, performing, displaying or creating derivative works based on the work as long as all references to Project Gutenberg are removed. Of course, we hope that you will support the Project GutenbergTM mission of promoting free access to electronic works by freely sharing Project GutenbergTM works in compliance with the terms of this agreement for keeping the Project GutenbergTM name associated with the work. You can easily comply with the terms of this agreement by keeping this work in the same format with its attached full Project GutenbergTM License when you share it without charge with others.
- 1.D. The copyright laws of the place where you are located also govern what you can do with this work. Copyright laws in most countries are in a constant state of change. If you are outside the United States, check the laws of your country in addition to the terms of this agreement before downloading, copying, displaying, performing, distributing or creating derivative works based on this work or any other Project Gutenberg^{TM} work. The Foundation makes no representations concerning the copyright status of any work in any country other than the United States.
- $1.E.\ Unless\ you\ have\ removed\ all\ references\ to\ Project\ Gutenberg:$
- 1.E.1. The following sentence, with active links to, or other immediate access to, the full Project GutenbergTM License must appear prominently whenever any copy of a Project GutenbergTM work (any work on which the phrase "Project Gutenberg" appears, or with which the phrase "Project Gutenberg" is associated) is accessed, displayed, performed, viewed, copied or distributed:

This eBook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at www.gutenberg.org. If you are not located in the United States, you will have to check the laws of the country where you are located before using this eBook.

- 1.E.2. If an individual Project GutenbergTM electronic work is derived from texts not protected by U.S. copyright law (does not contain a notice indicating that it is posted with permission of the copyright holder), the work can be copied and distributed to anyone in the United States without paying any fees or charges. If you are redistributing or providing access to a work with the phrase "Project Gutenberg" associated with or appearing on the work, you must comply either with the requirements of paragraphs 1.E.1 through 1.E.7 or obtain permission for the use of the work and the Project GutenbergTM trademark as set forth in paragraphs 1.E.8 or 1.E.9.
- 1.E.3. If an individual Project GutenbergTM electronic work is posted with the permission of the copyright holder, your use and distribution must comply with both paragraphs 1.E.1 through 1.E.7 and any additional terms imposed by the copyright holder. Additional terms will be linked to the Project GutenbergTM License for all works posted with the permission of the copyright holder found at the beginning of this work.
- 1.E.4. Do not unlink or detach or remove the full Project GutenbergTM License terms from this work, or any files containing a part of this work or any other work associated with Project

Gutenberg $^{\text{\tiny TM}}$.

- 1.E.5. Do not copy, display, perform, distribute or redistribute this electronic work, or any part of this electronic work, without prominently displaying the sentence set forth in paragraph 1.E.1 with active links or immediate access to the full terms of the Project Gutenberg $^{\text{\tiny TM}}$ License.
- 1.E.6. You may convert to and distribute this work in any binary, compressed, marked up, nonproprietary or proprietary form, including any word processing or hypertext form. However, if you provide access to or distribute copies of a Project Gutenberg^{TM} work in a format other than "Plain Vanilla ASCII" or other format used in the official version posted on the official Project Gutenberg^{TM} website (www.gutenberg.org), you must, at no additional cost, fee or expense to the user, provide a copy, a means of exporting a copy, or a means of obtaining a copy upon request, of the work in its original "Plain Vanilla ASCII" or other form. Any alternate format must include the full Project Gutenberg^{TM} License as specified in paragraph 1.E.1.
- 1.E.7. Do not charge a fee for access to, viewing, displaying, performing, copying or distributing any Project Gutenberg[™] works unless you comply with paragraph 1.E.8 or 1.E.9.
- 1.E.8. You may charge a reasonable fee for copies of or providing access to or distributing Project GutenbergTM electronic works provided that:
- You pay a royalty fee of 20% of the gross profits you derive from the use of Project Gutenberg™ works calculated using the method you already use to calculate your applicable taxes. The fee is owed to the owner of the Project Gutenberg™ trademark, but he has agreed to donate royalties under this paragraph to the Project Gutenberg Literary Archive Foundation. Royalty payments must be paid within 60 days following each date on which you prepare (or are legally required to prepare) your periodic tax returns. Royalty payments should be clearly marked as such and sent to the Project Gutenberg Literary Archive Foundation at the address specified in Section 4, "Information about donations to the Project Gutenberg Literary Archive Foundation."
- You provide a full refund of any money paid by a user who notifies you in writing (or by email) within 30 days of receipt that s/he does not agree to the terms of the full Project Gutenberg™ License. You must require such a user to return or destroy all copies of the works possessed in a physical medium and discontinue all use of and all access to other copies of Project Gutenberg™ works.
- You provide, in accordance with paragraph 1.F.3, a full refund of any money paid for a work or a replacement copy, if a defect in the electronic work is discovered and reported to you within 90 days of receipt of the work.
- You comply with all other terms of this agreement for free distribution of Project Gutenberg $^{\text{\tiny TM}}$ works.
- 1.E.9. If you wish to charge a fee or distribute a Project GutenbergTM electronic work or group of works on different terms than are set forth in this agreement, you must obtain permission in writing from the Project Gutenberg Literary Archive Foundation, the manager of the Project GutenbergTM trademark. Contact the Foundation as set forth in Section 3 below.

1.F.

- 1.F.1. Project Gutenberg volunteers and employees expend considerable effort to identify, do copyright research on, transcribe and proofread works not protected by U.S. copyright law in creating the Project GutenbergTM collection. Despite these efforts, Project GutenbergTM electronic works, and the medium on which they may be stored, may contain "Defects," such as, but not limited to, incomplete, inaccurate or corrupt data, transcription errors, a copyright or other intellectual property infringement, a defective or damaged disk or other medium, a computer virus, or computer codes that damage or cannot be read by your equipment.
- 1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES Except for the "Right of Replacement or Refund" described in paragraph 1.F.3, the Project Gutenberg Literary Archive Foundation, the owner of the Project Gutenberg™ trademark, and any other party distributing a Project Gutenberg™ electronic work under this agreement, disclaim all liability to you for damages, costs and expenses, including legal fees. YOU AGREE THAT YOU HAVE NO REMEDIES FOR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE PROVIDED IN PARAGRAPH 1.F.3. YOU AGREE THAT THE FOUNDATION, THE TRADEMARK OWNER, AND ANY DISTRIBUTOR UNDER THIS AGREEMENT WILL NOT BE LIABLE TO YOU FOR ACTUAL, DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES EVEN IF YOU GIVE NOTICE OF THE POSSIBILITY OF SUCH DAMAGE.
- 1.F.3. LIMITED RIGHT OF REPLACEMENT OR REFUND If you discover a defect in this electronic work within 90 days of receiving it, you can receive a refund of the money (if any)

you paid for it by sending a written explanation to the person you received the work from. If you received the work on a physical medium, you must return the medium with your written explanation. The person or entity that provided you with the defective work may elect to provide a replacement copy in lieu of a refund. If you received the work electronically, the person or entity providing it to you may choose to give you a second opportunity to receive the work electronically in lieu of a refund. If the second copy is also defective, you may demand a refund in writing without further opportunities to fix the problem.

- 1.F.4. Except for the limited right of replacement or refund set forth in paragraph 1.F.3, this work is provided to you 'AS-IS', WITH NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.
- 1.F.5. Some states do not allow disclaimers of certain implied warranties or the exclusion or limitation of certain types of damages. If any disclaimer or limitation set forth in this agreement violates the law of the state applicable to this agreement, the agreement shall be interpreted to make the maximum disclaimer or limitation permitted by the applicable state law. The invalidity or unenforceability of any provision of this agreement shall not void the remaining provisions.
- 1.F.6. INDEMNITY You agree to indemnify and hold the Foundation, the trademark owner, any agent or employee of the Foundation, anyone providing copies of Project GutenbergTM electronic works in accordance with this agreement, and any volunteers associated with the production, promotion and distribution of Project GutenbergTM electronic works, harmless from all liability, costs and expenses, including legal fees, that arise directly or indirectly from any of the following which you do or cause to occur: (a) distribution of this or any Project GutenbergTM work, (b) alteration, modification, or additions or deletions to any Project GutenbergTM work, and (c) any Defect you cause.

Section 2. Information about the Mission of Project Gutenberg™

Project Gutenberg $^{\text{TM}}$ is synonymous with the free distribution of electronic works in formats readable by the widest variety of computers including obsolete, old, middle-aged and new computers. It exists because of the efforts of hundreds of volunteers and donations from people in all walks of life.

Volunteers and financial support to provide volunteers with the assistance they need are critical to reaching Project Gutenberg^{TM}'s goals and ensuring that the Project Gutenberg^{TM} collection will remain freely available for generations to come. In 2001, the Project Gutenberg Literary Archive Foundation was created to provide a secure and permanent future for Project Gutenberg^{TM} and future generations. To learn more about the Project Gutenberg Literary Archive Foundation and how your efforts and donations can help, see Sections 3 and 4 and the Foundation information page at www.gutenberg.org.

Section 3. Information about the Project Gutenberg Literary Archive Foundation

The Project Gutenberg Literary Archive Foundation is a non-profit 501(c)(3) educational corporation organized under the laws of the state of Mississippi and granted tax exempt status by the Internal Revenue Service. The Foundation's EIN or federal tax identification number is 64-6221541. Contributions to the Project Gutenberg Literary Archive Foundation are tax deductible to the full extent permitted by U.S. federal laws and your state's laws.

The Foundation's business office is located at 809 North 1500 West, Salt Lake City, UT 84116, (801) 596-1887. Email contact links and up to date contact information can be found at the Foundation's website and official page at www.gutenberg.org/contact

Section 4. Information about Donations to the Project Gutenberg Literary Archive Foundation

Project Gutenberg $^{\text{TM}}$ depends upon and cannot survive without widespread public support and donations to carry out its mission of increasing the number of public domain and licensed works that can be freely distributed in machine-readable form accessible by the widest array of equipment including outdated equipment. Many small donations (\$1 to \$5,000) are particularly important to maintaining tax exempt status with the IRS.

The Foundation is committed to complying with the laws regulating charities and charitable donations in all 50 states of the United States. Compliance requirements are not uniform and it takes a considerable effort, much paperwork and many fees to meet and keep up with these requirements. We do not solicit donations in locations where we have not received written confirmation of compliance. To SEND DONATIONS or determine the status of compliance for any particular state visit www.gutenberg.org/donate.

While we cannot and do not solicit contributions from states where we have not met the solicitation requirements, we know of no prohibition against accepting unsolicited donations

from donors in such states who approach us with offers to donate.

International donations are gratefully accepted, but we cannot make any statements concerning tax treatment of donations received from outside the United States. U.S. laws alone swamp our small staff.

Please check the Project Gutenberg web pages for current donation methods and addresses. Donations are accepted in a number of other ways including checks, online payments and credit card donations. To donate, please visit: www.gutenberg.org/donate

Section 5. General Information About Project Gutenberg $^{\scriptscriptstyle{TM}}$ electronic works

Professor Michael S. Hart was the originator of the Project Gutenberg^m concept of a library of electronic works that could be freely shared with anyone. For forty years, he produced and distributed Project Gutenberg^m eBooks with only a loose network of volunteer support.

Project GutenbergTM eBooks are often created from several printed editions, all of which are confirmed as not protected by copyright in the U.S. unless a copyright notice is included. Thus, we do not necessarily keep eBooks in compliance with any particular paper edition.

Most people start at our website which has the main PG search facility: www.qutenberg.org.

This website includes information about Project Gutenberg $^{\text{TM}}$, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.