



**ADH<sup>®</sup> NETCOM<sup>™</sup> AUTOMATIC AIR DEHYDRATOR  
DISCHARGE MANIFOLD WITH SAFETY RELIEF VALVE  
REPLACEMENT PROCEDURE**

**Replacement Kit Part Number 24088  
(for use in AC or Redundant DC Units)**

**Replacement Kit Part Number 24751  
(for use in AC NEMA Units)**

**Document Part Number 24101**

## SAFETY INFORMATION AND WARNINGS

### Abnormal Odor or Smoke



In the event of smoke or a burning or abnormal odor, immediately interrupt power to the ADH NETCOM with the POWER switch at the rear of the unit, unplug the unit, or turn off the circuit breaker controlling the outlet. Note that only the AC model of the ADH NETCOM has an ON / OFF switch.

### Lethal Voltages Present



Lethal voltages are present inside the ADH NETCOM. Service should be performed by qualified personnel only. There are no user serviceable components inside the chassis.

### Pneumatics



Each of the air pumps inside the ADH NETCOM automatic air dehydrator is capable of generating as much as 24 psig (1,655mbar). Other attached dry air sources may be capable of generating even higher pressures. Proper safety practice requires treating all pneumatic components with care. Always vent the system to atmospheric pressure before servicing pneumatic components.

### Rack Mounting



Before and after rack mounting the ADH NETCOM, ensure that the rack is stable. Mounting of the ADH NETCOM into a rack should be such that a hazardous condition is not created due to uneven mechanical loading. Verify that adequate air flow and power source capacity is available to the unit. Ensure that the ADH NETCOM maximum operating temperature of 130°F (55°C) will not be compromised by other components in the rack. Ensure reliable earthing of the ADH NETCOM.

**ADH NETCOM DISCHARGE MANIFOLD  
WITH SAFETY RELIEF VALVE  
REPLACEMENT PROCEDURE**

This procedure addresses the removal and replacement of the Discharge Manifold with Safety Relief Valve in an ADH NETCOM Automatic Air Dehydrator. The first section addresses the replacement of the Discharge Manifold in ADH NETCOM AC and DC units. The second section, starting on page 7, addresses the replacement of the Discharge Manifold in an ADH NETCOM AC NEMA unit. It is recommended to read the entire procedure prior to beginning work.

**INVENTORY LIST**

Identify the following items in this kit prior to beginning work.

**TOOLS REQUIRED**

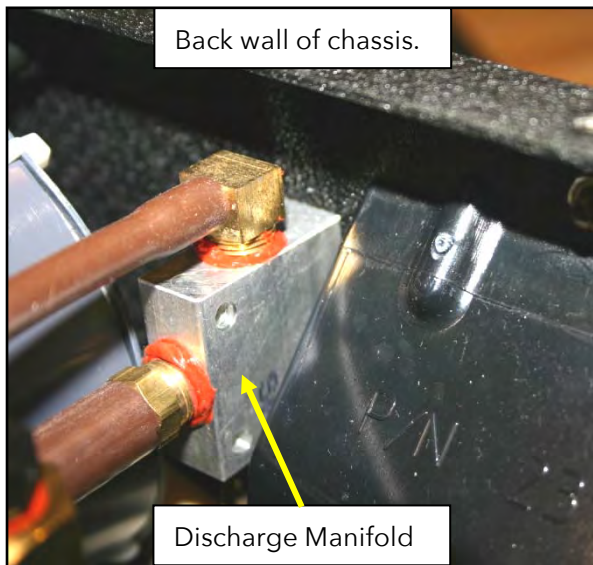
The following tools are needed to perform this procedure:

- Straight slot screwdriver
- 1/2" / 9/16" open-end wrench
- Tubing wrench or vacuum tube pliers
- Pipe sealing tape or RTV
- Adjustable wrench
- Long screwdriver

<b>Item Number</b>	<b>Part Number</b>	<b>Item Quantity</b>	<b>Item Description</b>
1	23173 (AC/DC) ----- 23549 (AC NEMA)	1	Discharge Manifold with Safety Relief Valve (for use in AC / Redundant DC units) ----- Discharge Manifold with Safety Relief Valve (for use in AC NEMA units)
2	24101	1	Instruction Manual (this document)

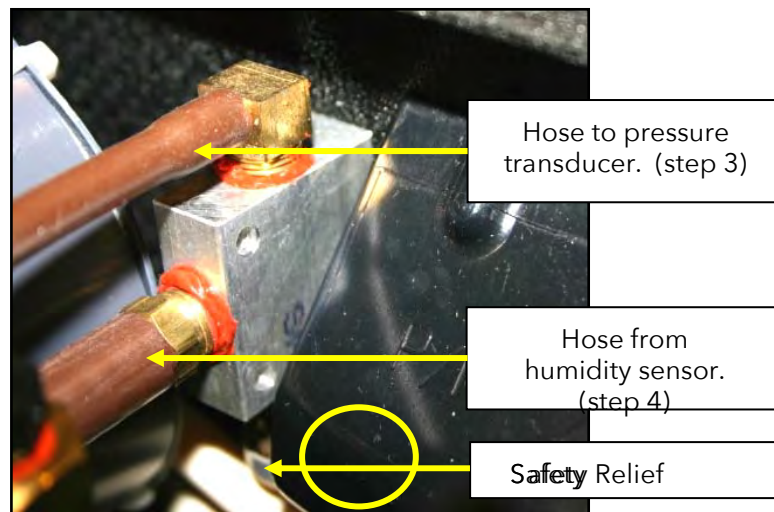
## DISCHARGE MANIFOLD WITH SAFETY RELIEF VALVE REMOVAL AND REPLACEMENT

To replace a Discharge Manifold with Safety Relief Valve (23173) in either an ADH NETCOM Automatic Air Dehydrator with AC power or an ADH NETCOM with Redundant DC power, perform the steps below. Refer to Figure 1. To replace a Discharge Manifold (23549) in an ADH NETCOM AC NEMA unit, proceed to page 7.



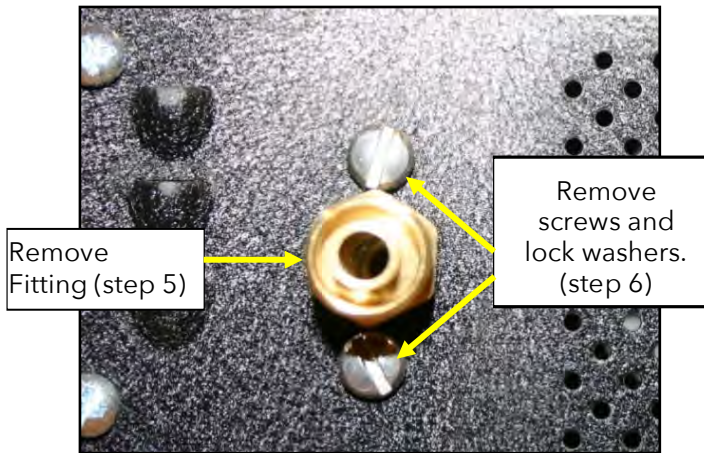
**Figure 1. ADH NETCOM AUTOMATIC AIR DEHYDRATOR DISCHARGE MANIFOLD WITH SAFETY RELIEF VALVE.**

1. Shut off AC machine power by placing power switch in the OFF (O) position, then unplugging the power cord. Shut off DC machine power by shutting off the external power supply. If possible, move the dehydrator to a work table.
2. Remove the rear top machine panel. Retain mounting hardware.
3. Using a tubing wrench or vacuum tubing pliers, carefully remove from the discharge manifold the upper air hose to the pressure transducer. Refer to Figure 2.
4. Using a tubing wrench or vacuum tubing pliers, carefully disconnect from the discharge manifold the lower air hose coming from the humidity sensor. Refer to Figure 2.



**Figure 2. DISCHARGE MANIFOLD AIR HOSES.**

5. Remove and retain the external outlet fitting. Refer to Figure 3. Make sure to save the fitting for re-use during installation.
6. Remove and retain the screws and lock washers from above and below the outlet fitting on the back of the chassis. Refer to Figure 3.

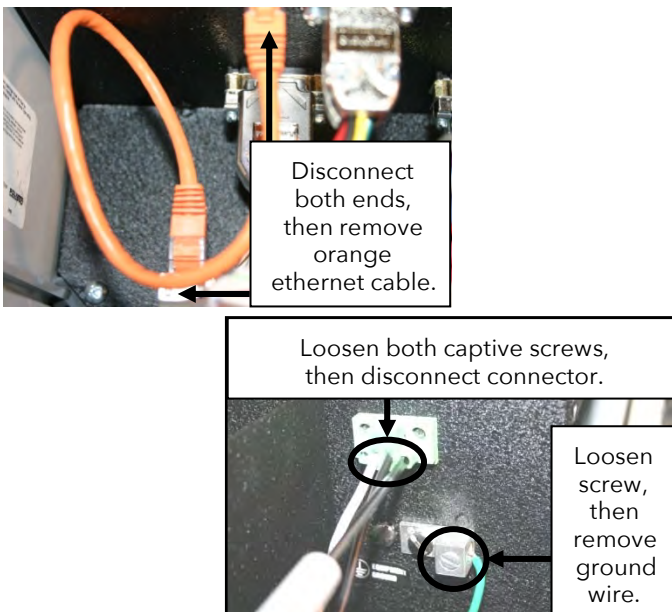


**Figure 3. DISCHARGE MANIFOLD EXTERNAL COMPONENTS.**

7. With the two air hoses disconnected and the rear fitting and mounting hardware removed, remove the discharge manifold from the machine.
8. Two fittings are included as part of the replacement kit. These should already be assembled onto the new manifold. If not, install the fittings onto the new manifold as on the original assembly and apply pipe sealing tape or RTV on the threads for a more secure fit.
9. Insert the new discharge manifold into the machine. While holding the discharge manifold up against the back wall of the chassis from inside the machine, from the outside of the chassis, install the screws and lock washers from above and below the fitting which were removed in step 6 and torque to 5 1/2 in/lb. Insert the fitting receptacle through the back hole of the chassis as on the original manifold.
10. Connect the two air hoses removed in steps 3 and 4 to the new discharge manifold. Be sure to connect them the same way they were connected to the original manifold, with the lower hose connecting to the pressure transducer and the upper hose connecting from the humidity sensor.
11. Reinstall the rear top panel using the hardware removed in step 2.
12. Restore machine power.

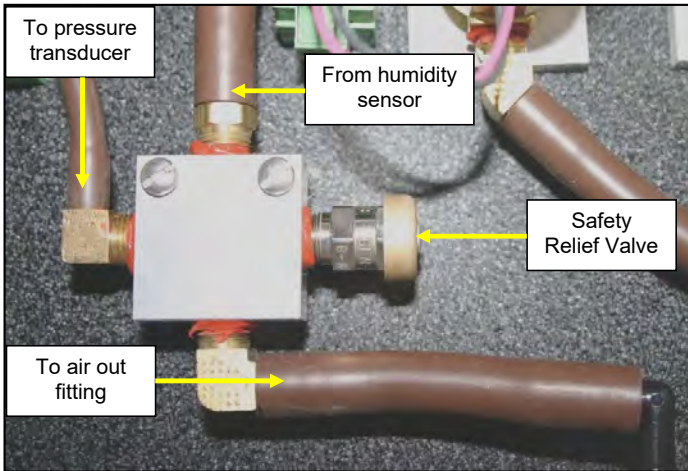
To replace the Discharge Manifold (23549) in an ADH NETCOM AC NEMA, perform the steps below.

1. Shut off machine power by unplugging the unit.
2. Open the two front door latches, loosen the two captive screws in the corners of the housing opposite the hinges, then open the NEMA box. Place an object underneath the door once open to help support it during this procedure.
3. Remove the orange ethernet cable on the left by disconnecting both ends, then removing it. Set aside for re-use. Remove the power cable connector on the right by loosening the captive screw on each end of the green connector, then unplugging the connector. Disconnect the ground wire by loosening the ground wire retaining screw, then carefully removing the ground wire. Refer to Figure 1.



**Figure 1. DISCONNECTING THE ETHERNET CABLE, THE POWER CABLE CONNECTOR, AND THE GROUND WIRE.**

4. Remove and retain the four mounting screws from the four corners of the protective front cover, then slowly lift the front cover, carefully flip it over, then set it down, upside down, to rest on the inside of the enclosure door. Be careful as there are still many wires connected between the enclosure and the front cover and there isn't a lot of slack. Note that the two upper front cover mounting screws are located in plain sight in the top corners of the front cover, while the two lower front cover corner mounting screws are located down in the front "well" of the unit. Use a long screwdriver to remove them.
5. Note how the three air hoses are connected to the existing discharge manifold, then carefully disconnect the hoses from the existing manifold. Refer to Figure 2. The hose in the middle of the back or top side of the manifold runs from the humidity sensor. The hose on the left side of the manifold runs to the pressure transducer. The hose on the front or bottom of the manifold runs to the air out fitting. These three hoses will be connected to the new discharge manifold in this same arrangement.



**Figure 2. ADH NETCOM AC NEMA DISCHARGE MANIFOLD.**

6. Remove and retain the two screws and lock washers securing the discharge manifold to the chassis. With the three air hoses disconnected and the mounting hardware removed, take the existing discharge manifold out of the machine.
7. Two fittings are included as part of the replacement kit. These should already be assembled onto the new manifold. If not, install the fittings onto the new manifold as on the original assembly.
8. Align the mounting holes of the new discharge manifold with the Pem® nuts in the floor of the chassis to which the original discharge manifold had been installed. Using the two screws and lock washers retained in step 6 of this section, install the new discharge manifold where the original one had been, securing the two screws into the Pem® nuts embedded in the floor of the chassis. Torque to 8 in/lb.
9. Carefully connect the air hoses to the new discharge manifold as they had been connected to the original manifold. Refer back to Figure 2 on the previous page. Connect the hose from the humidity sensor to the fitting in the middle of the back or top side of the new discharge manifold. Connect the hose to the pressure transducer to the fitting on the left side of the new discharge manifold. Connect the hose to the air out fitting to the front or bottom fitting of the new discharge manifold. Make sure all hoses connections are tight.
10. Reinstall the front cover removed in step 4 of this section. If it was placed upside down on the lid of the unit during this procedure, carefully turn the cover back over and work it back into position, past the wires and other components in the enclosure. Reinstall the four corner screws securing the front cover to the chassis.
11. Reconnect the ground wire by inserting it behind the retaining screw from which it was removed, then tighten the ground wire retaining screw. Reconnect the green power connector by holding it in place then tightening the two captive screws removed in step 3 of this section. Reconnect both ends of the orange ethernet cable removed in step 3 of this section. It does not matter which end of the ethernet cable goes into which receptacle.
12. With the ground wire, power connector and ethernet cable reconnected, close the lid of the NEMA enclosure and secure the two latches opposite the hinges. Secure the lid in place by reinstalling the two captive screws in the two outer corners of the lid.
13. Restore machine power by plugging the unit back in.

## QUESTIONS AND COMMENTS

For technical help, questions, or comments concerning this or any ETI, Inc., product, contact the Customer Service Department between 8:00 a.m. and 5:00 p.m. EST.

## DISCLAIMER

ETI, Inc. makes no representations or warranties, either expressed or implied with respect to the contents of this publication or the products that it describes, and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. ETI, Inc. reserves the right to revise this publication and to make changes and improvements to the products described in this publication without the obligation of ETI, Inc. to notify any person or organization of such revisions, changes or improvements.

No part of this manual may be reproduced or translated in any form or by any means, electronic or mechanical including photocopying and recording, for any purpose without the express written consent of ETI, Inc.

The ETI logo, We Manage Heat, and ADH are registered trademarks of ETI, Inc. NETCOM is a trademark

Copyright © 2012 ETI, Inc. All rights reserved.