



**ADH[®] NETCOM[™] AUTOMATIC AIR DEHYDRATOR
AIR DRYING CANISTERS
REPLACEMENT PROCEDURE**

**Replacement Kit Part Number 25551
Document Part Number 24056**

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 AIR DRYING CANISTERS REPLACEMENT PROCEDURE

This procedure addresses the removal and replacement of the air drying canisters in an ADH NETCOM Automatic Air Dehydrator. The first section addresses the replacement of the canisters in the AC and DC models. The second section, starting on page 8, addresses the replacement of the air drying canisters in the ADH NETCOM AC NEMA configuration. 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:

- Small straight slot screwdriver
- Ruler or other measuring device
- Cutting devices for tie wraps and hoses
- Straight slot screwdriver
- Pencil
- Felt-tip marker

NOTE

Even if only one canister is bad, this procedure calls for the replacement of both canisters so that both are new and in the same known condition.

Item Number	Part Number	Item Quantity	Item Description
1	25529	1	Right Side (Outer) Canister Assembly
2	25528	1	Left Side (Inner) Canister Assembly
3	24053	1	Tube Assembly
5	14506	4	Tie Wraps
4	24056	1	Instruction Manual (this document)

CANISTER REMOVAL AND REPLACEMENT

To replace the air drying canisters (25528 and 25529) in 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 the canisters in an ADH NETCOM AC NEMA unit, proceed to page 8.

To ensure proper identification of the canisters, as shown in Figure 1, canister 1 is the left side canister and canister 2 is on the right.

NOTE:

1. Shut off machine power.
2. Disconnect unit from installation location and move to well-lit work bench. Make sure to retain all mounting hardware.
3. Remove and retain the four screws and washers securing the top front panel to the unit. Next, remove and retain the eight screws and washers securing the top rear panel to the unit. The two sizes of mounting hardware are not the same and are not interchangeable.

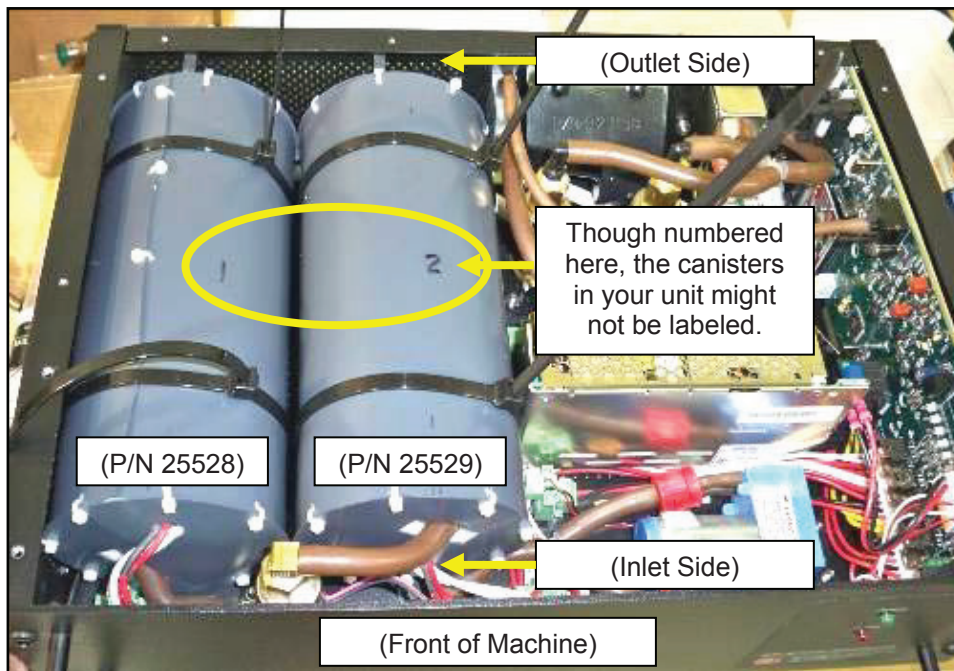


Figure 1. THE TWO ADH NETCOM AIR DRYING CANISTERS.

4. Disconnect the canister power cables by loosening the captive screw at each end of the green power connector. See Figure 2.
5. Carefully note the connections of the existing air hoses. The new installation will duplicate this orientation. Because they will be re-used, carefully disconnect the air hoses on the inlet side (in front) of the canisters from the barbed fittings on the solenoids. Leave the hoses attached to the canister fittings; disconnect only at the solenoid ends. Twist the hoses first to loosen them, then carefully pull the hoses off the solenoid fittings. Retain these hoses for re-use in this procedure.
6. Disconnect the air hoses on the outlet side of (behind) the canisters from the barbed fittings on the solenoid valves. Leave the hoses attached to the canister fittings; disconnect only at the solenoid ends. Twist the hoses first to loosen them, then pull the hoses off the solenoid fittings by slicing the white tubing off the solenoid fitting.
7. Cut the black tie wraps securing the canisters to their mounting brackets.

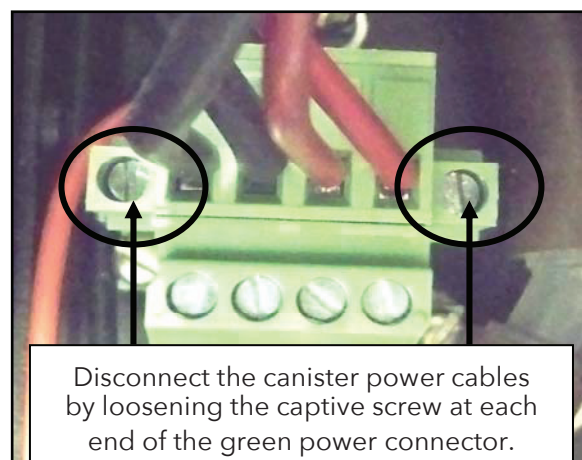


Figure 2. THE CANISTER POWER CABLE CONNECTOR.

8. Once the green power cable connectors have been disconnected and the tie wraps cut, lift the existing canisters out of the chassis. Carefully remove the existing inlet hoses from the canisters and retain them for re-use. The replacement canisters are already wired with a new power cable connector, so the existing canister assemblies, including the wiring and connectors, may be discarded. Retain the existing inlet hoses. As a precaution, retain the original outlet hoses until the new outlet hoses have been made.

9. The inlet hoses will be re-used on the new canisters, but new outlet hoses will have to be cut from the length of hose included in the kit. Measure and cut carefully. In Table 1, locate your unit type (AC / DC or AC NEMA), then cut the outlet hoses from the tubing in the kit to the correct length for your unit. Measure and cut carefully because after cutting, both parts of the hose will be used.

11. Connect the outlet hoses between the fittings on the back of the canisters and the solenoid valve fittings near the back of the unit. When connecting the new outlet hoses to the backs of the canisters, make sure the canister fittings point to the right, away from the left wall of the unit.

Unit Type	Canister 1 Inlet Hose	Canister 2 Inlet Hose	Canister 1 Outlet Hose	Canister 2 Outlet Hose
AC / DC	2.25 in.	3.0 in.	7.75 in.	6.25 in.
AC NEMA	2.5 in.	3.0 in.	11.0 in.	9.0 in.

Table 1. CANISTER HOSE LENGTHS (in inches).

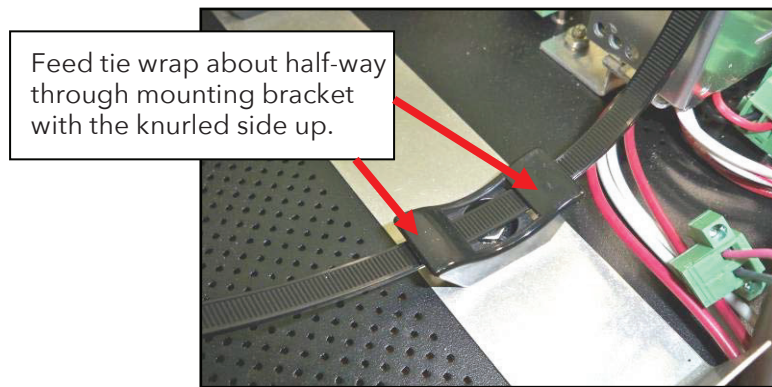


Figure 3. ROUTING THE TIE WRAPS THROUGH THE MOUNTING BRACKETS.

10. With the knurled side up, route the tie wraps supplied with this kit through the canister mounting brackets located on the floor of the unit. Try to center the tie wrap in the bracket. Refer to Figure 3.

12. Install the canisters at this time. Install the left side canister, #1, (Figure 1, Item 1) first, then the right side canister, #2, (Figure 1, Item 2). Make sure the fitting on the back of each canister points toward the right.

NOTE:

Refer to Table 2 below for proper canister placement and positioning. The inlet side of the canister is the one with the electrical leads and connector. Make sure that the side of the canister with the electrical leads faces the inlet solenoid inside the chassis. The outlet side of the canister is the side closer to the chassis wall.

In Table 2, the proper positioning of the canisters in their mounting bases is expressed as the time display on a clock to best reflect the desired canister rotation based on the relative position of the specified fitting. In other words, the designation of "3:00" means that the canister should be rotated so that the specified fitting points to the right.

13. Duplicating the original inlet hose orientation, connect the inlet hoses between the solenoid valve barbed fittings and the inlet fittings on the front side of both canisters.
14. After first checking that all hoses are connected securely at both ends, wrap the tie wraps around each canister, feed the narrow end of each tie wrap through the larger end of the tie wrap, then pull tight to fasten each canister securely to its mounting bracket.
15. Plug the canister power cable connectors into their receptacles. Notice that the underside of the connector is keyed, flat on one side and rounded on the other, so that it can plug into the receptacle in only one way.
16. Finally, reinstall the front and rear top panels using the mounting hardware removed in step 3. Remember that two different sizes of hardware are used on the two panels and that they are not interchangeable.

AC or DC Units				AC NEMA Units			
Canister 1 (P/N 25528) (closer to wall)		Canister 2 (P/N 25529) (further from wall)		Canister 1 (P/N 25528) (closer to wall)		Canister 2 (P/N 25529) (further from wall)	
<u>Fittings</u>		<u>Fittings</u>		<u>Fittings</u>		<u>Fittings</u>	
Inlet (front)	Outlet (rear)	Inlet (front)	Outlet (rear)	Inlet (left)	Outlet (right)	Inlet (left)	Outlet (right)
3:00	3:00	10:00	3:00	6:00	6:00	12:00	6:00

Table 2. PROPER CANISTER PLACEMENT AND POSITIONING.

To replace the air drying canisters (25529 and 25528) 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.

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-handled screwdriver to remove them.

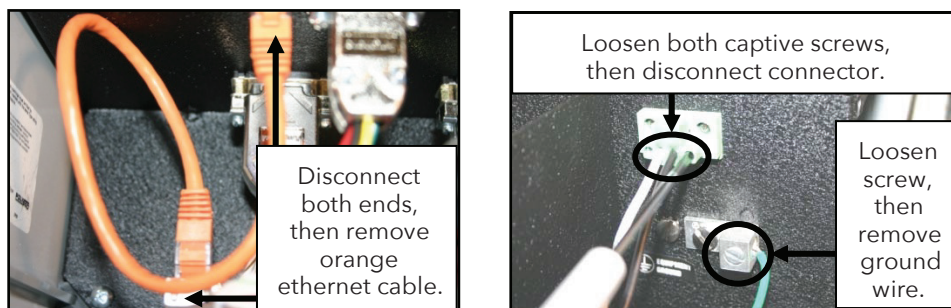


Figure 1. DISCONNECTING THE ETHERNET CABLE, THE POWER CABLE CONNECTOR, AND THE GROUND WIRE.

5. Disconnect the canister power cables by loosening the captive screw at each end of the green power connector. See Figure 2.
6. Carefully note the position of the canisters and fittings, as well as the existing air hose connections. The new installation will duplicate this same orientation. Because they will be re-used, carefully disconnect the air hoses on the inlet (left) side of the canisters from the barbed fittings on the solenoids. Leave the hoses attached to the canister fittings; disconnect only at the solenoid ends. Twist the hoses first to loosen them, then carefully pull the hoses off the solenoid fittings. Retain these hoses for re-use in this procedure.
7. Disconnect the air hoses on the outlet (right) side of the canisters from the barbed fittings on the solenoid valves. Leave the hoses attached to the canister fittings; disconnect the hoses only at the solenoid ends. Twist the hoses first to loosen them, then pull the hoses off the solenoid fittings by slicing the white tubing off the solenoid fitting.
8. Cut the black tie wraps securing the canisters to their mounting brackets.
9. Once the green power cable connectors have been disconnected and the tie wraps cut, lift the existing canisters out of the chassis. Carefully remove the existing inlet hoses from the canisters and retain them for re-use. The replacement canisters are already wired with a new power cable connector, so the existing canister assemblies, including the wiring and connectors, may be discarded. Retain the existing inlet hoses. As a precaution, retain the original outlet hoses until the new outlet hoses have been made.

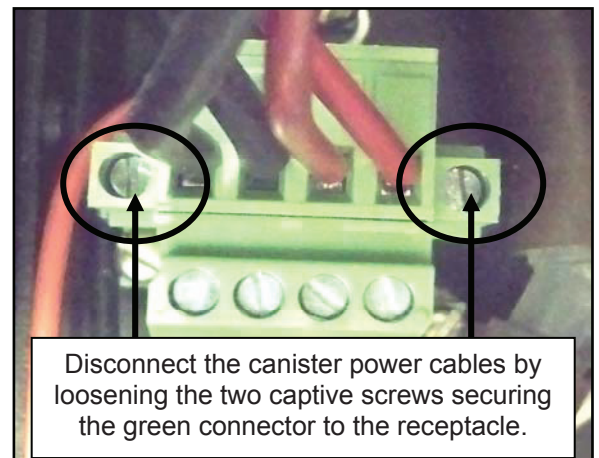


Figure 2. THE CANISTER POWER CABLE CONNECTOR.

10. The inlet hoses will be re-used on the new canisters, but new outlet hoses will have to be cut from the length of hose included in the kit. Measure and cut carefully. In Table 1, locate your unit type (AC / DC or AC NEMA), then cut the outlet hoses from the tubing in the kit to the correct length for your unit. Measure and cut carefully because after cutting, both parts of the hose will be used.
11. With the knurled side up, route the tie wraps supplied with this kit through the canister mounting brackets located on the chassis floor. Try to center the tie wrap in the bracket. Refer to Figure 3.
12. Connect the outlet hoses between the fittings on the back of the canisters and the solenoid valve fittings near the right chassis wall. When connecting the new outlet hoses to the backs of the canisters, make sure the canister fittings point away from the chassis wall.

Unit Type	Canister 1 Inlet Hose	Canister 2 Inlet Hose	Canister 1 Outlet Hose	Canister 2 Outlet Hose
AC / DC	2.25 in.	3.0 in.	7.75 in.	6.25 in.
AC NEMA	2.5 in.	3.0 in.	11.0 in.	9.0 in.

Table 1. CANISTER HOSE LENGTHS (in inches).

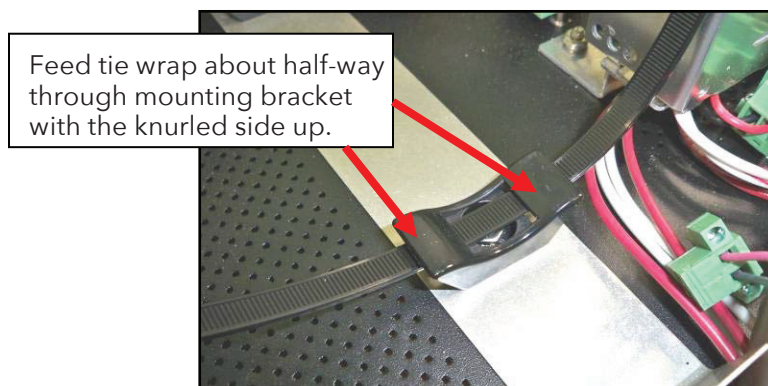


Figure 3. ROUTING THE TIE WRAPS THROUGH THE MOUNTING BRACKETS.

13. Position the replacement canisters on their respective mounting brackets. Install the rear canister (#1; P/N 25528) first and then the front canister (#2; P/N 25529). Make sure the fittings on the backs of the canisters both point away from the chassis wall.
14. Duplicating the original inlet hose orientation, connect the inlet hoses between the solenoid valve barbed fittings and the inlet fittings on the left side of the canisters.
15. After first checking that all hoses are connected securely at both ends, wrap the tie wraps around each canister, feed the narrow end of each tie wrap through the larger end of the tie wrap, then pull tight to fasten each canister securely to the mounting bracket.
16. Plug the canister power cable connectors into their receptacles. Notice that the underside of the connector is keyed, flat on one side and rounded on the other, so that it can plug into the receptacle in only one way.

NOTE:

Refer to Table 2 below for proper canister placement and positioning. The inlet side of the canister is the one with the electrical leads and connector. Make sure that the side of the canister with the electrical leads faces the inlet solenoid inside the chassis. The outlet side of the canister is the side closer to the chassis wall.

In Table 2, the proper positioning of the canisters in their mounting bases is expressed as the time display on a clock to best reflect the desired canister rotation based on the relative position of the specified fitting. In other words, the designation of "3:00" means that the canister should be rotated so that the specified fitting points to the right.

AC or DC Units				AC NEMA Units			
Canister 1 (P/N 25528) (closer to wall)		Canister 2 (P/N 25529) (further from wall)		Canister 1 (P/N 25528) (closer to wall)		Canister 2 (P/N 25529) (further from wall)	
Fittings				Fittings			
Inlet (front)	Outlet (rear)	Inlet (front)	Outlet (rear)	Inlet (left)	Outlet (right)	Inlet (left)	Outlet (right)
3:00	3:00	10:00	3:00	6:00	6:00	12:00	6:00

Table 2. PROPER CANISTER PLACEMENT AND POSITIONING.

17. 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.
18. 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.
19. 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.
20. 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.

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