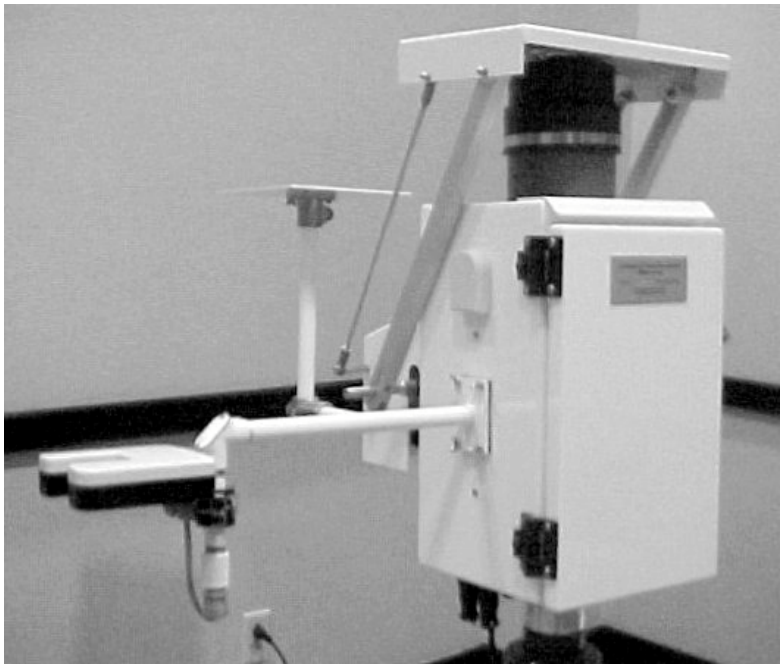
MDN
Mercury and General Purpose Precipitation Sampler



OPERATION MANUAL

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Part # 22-125-2
English: 03/07

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1 Scope Of Manual

This manual contains a product description, installation, and operating instructions together with maintenance procedures for the MDN wet only atmospheric deposition sampler. A list of replacement parts, electrical schematics and wiring diagrams are also provided.

1.1 Purpose Of Equipment

The MDN sampler is used to collect and composite "wet only" samples of rain, snow and other precipitation.

1.1.1 General Description Of Equipment

An infra-red detector attached to the main housing senses precipitation. An internal drive motor uncovers the sample collector and keeps it open until precipitation stops. Design of the sampler minimizes horizontal surfaces to prevent contamination due to splashing.

1.1.2 Detailed Description Of Equipment

1.1.3 Precipitation Sensor:

An infra-red sensor detects precipitation at the rate of least one drop per minute and closes after one minute of no sensed precipitation. Design of sensor minimizes "Hunting" during marginal precipitation events.

1.1.4 Housing:

Powder coated, seam welded Aluminum rated NEMA 4X (IP65) finished in white.

1.1.5 Control Panel:

All function controls are located on a removable panel in the control housing. All electrical connections are keyed, plug-in connections. The following controls are located on the control panel:

Lightning and Surge Protectors..

Relays for precipitation sensing and motor operation

D.C. Power Supply for precipitation sensor Power supply for precipitation sensor

1.1.6 Drive Motor:

Oil immersed armature and gear train, rated NEMA 4X (IP65)

1.1.7 Moving Cover:

Seals sample container when closed.

1.1.8 Splash Shield:

Prevents ground material splashing of material on to under side of cover when cover is opened

1.1.9 AC Cable:

Grounded, 3 wire cable connects to keyed fitting on underside of sampler and is secured by a locking ring.

1.1.10 Output Cable:

2 wire cable connects to keyed fitting on underside of sampler and is secured by a locking ring. This provides a unpowered contact when sampler is open. May be connected to a data logger or to the event recorder

(N-CON Part # 00-055) in a Belfort rain gage, as used in NADP installations.

1.2 Technical Specifications

1.2.1 Sample Train: (Standard)
Polyethylene funnel
PTEG sample bottle (Capacity: 2 liters)
Furnished: 1 each

1.2.2 Sample Train (Option #1)
Glass funnel, glass anti-evaporation capillary Glass sample bottle (Capacity: 2 liters)

1.2.3 Sample Train (Option #2)
Polyethylene funnel
Polypropylene bottle (Capacity: 1.5 liter)

1.2.4 Precipitation Sensor:
Type: Infra-red transmitter and receiver
Opening: Within 20 seconds of onset of precipitation
Closing: Within 2 minutes of end of precipitation
User programmable for other opening and closing intervals

1.2.5 Auxiliary unpowered contact for Data Logger or Event Recorder

1.2.6 Heating system 200Watts with circulating fan and thermostatic temperature control.

1.2.7 Temperature control with optional thermoelectric chiller 4 - 32º C 550BTU/hr 140Watts

1.2.8 Dimensions: 27” (68cm) High 16” (41cm) Wide 16” (41cm) Deep (less sensor)
1.2.9 Weight: Net: 80 Pounds (36 Kg) Shipping: 110 Pounds (50Kg.)

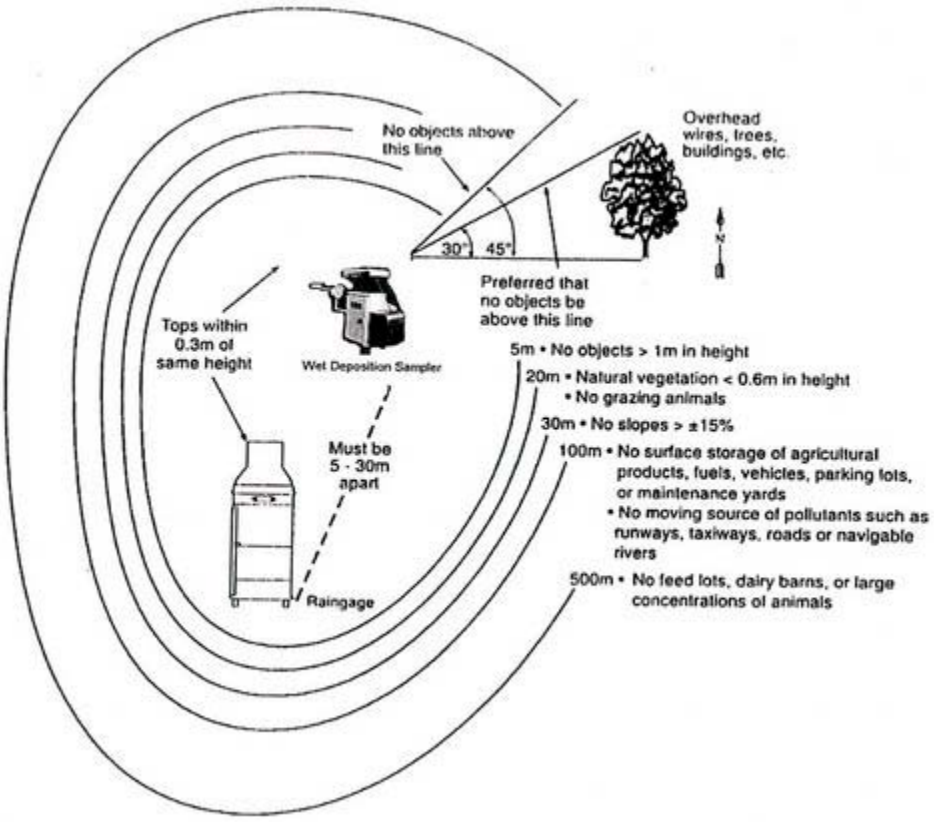
1.3 Power Requirements:

AC (115 or 220v, 60Hz) power. User must provide a Ground Fault Interrupter for safety.
Or use Ground Fault Interrupter cable ((15-524)

2 INSTALLATION AND SITE RECOMMENDATIONS

2.1 SITE RECOMENDATIONS

Drawings courtesy of NADP



2.2 Items recommended for installation

Six foot length of 2" NPS pipe.

Post hole digger or suitable boring tool if installing in ground.

Quick setting concrete, if soil conditions require setting stanchion in concrete.

Heavy mallet and block of wood for top of stanchion.

Alternate: 2" NPT 2-3/8" O.D. Pipe mounting attached to suitable base. 2" NPT Pipe cut to provide approx. 36" above ground level.

Yardstick or tape measure.

Carpenters level

Allen Wrench set (including 3/16ths & 1/8thth)

Screwdriver, ¼" straight blade

2.3 Stanchion Placement

Stanchion for mounting the sampler should be placed in accordance with the site selection diagram above.

2.4 Stanchion installation

A suitable hole should be dug and the length of pipe set in concrete (as required) with top approximately 36 inches above ground level. Be sure to align pipe vertically. set in concrete, be sure to leave bottom open to permit drainage.

2.5 Place Sampler on Stanchion

Place sampler on top of stanchion and tighten one set screw to prevent rotation.

Cut the straps securing the cover to the sample collector funnel.

In areas where there is a high level of snow, stanchion should be placed on a suitable raised wooden platform with adjustable collar so that sampler may be raised.

2.6 Attach Splash Shield to motor cover

Remove splash shield assembly from the carton and attach the mounting flange to the back of the motor cover to the 4 10-32 studs on the motor cover using the 10-32 lock washers and nuts provided.

Tighten securely.

2.7 Sensor Installation

Remove the 4 wing nuts and lock washers on the side of the sampler that will be used to install the precipitation sensor

Hold sensor up to mounting studs and connect the keyed Molex connector to the Molex connector taped to the outside of the housing. Push the connected Molex assembly back into the housing.

Align the holes in the sensor mounting with the studs on the housing and secure the mounting to the housing with the 4 lock washers and wing nuts. Tighten firmly.

2.8 Power Connection AC

Provide a grounded, GFI controlled outlet to the sampler or use optional GFI equipped power cable (15-524).

Connect the AC power cable to the socket on the underside of the sampler. Leave some slack in the cable and secure the cable to the stanchion with suitable tape, so that if will not fall on the ground when disconnected.

DO NOT CONNECT TO POWER OUTLET AT THIS TIME.

2.9 System Grounding

To insure proper operation, the system's lightning transient surge protectors, the sampler must be connected to a zero resistance earth ground. In most installations it is advisable to ground the mounting stanchion to a copper clad earth-grounding rod.

2.10 Recorder/Data Logger Output Cable Installation

Connect output cable to fitting on underside of the sampler. This provides an unpowered contact while the sampler is open

2.11 Align the Splash Shield

Plug the power cable to the power source.

Wait about two minutes to allow sensor to warm up.

Open sampler moving cover by waving fingers between sensor heads.

Sampler moving cover will open after approximately 20 seconds. Allow cover to come to a stop at fully open position.

Disconnect power cable so that cover will not close.

Slightly loosen the bolt on the swivel under the splash shield so that slight pressure will move the splash shield. Adjust splash shield so that cover rests evenly on splash shield. Tighten swivel bolt.

2.12 Install Glass Sample Train

Open cover and unplug power cable, so cover will stay open.

Open sampler front door. and remove shipping funnel.

Glass Sample train (funnel, capillary and bottle are shipped separately). To install glass sample train, follow protocol supplied by NADP and Frontier Geosciences.

When funnel is installed, restore power to close the cover to retain the funnel in place.

With bottle on tray, rotate the tray/bottle counter-clockwise to raise the bottle until it just contacts the capillary bulb.

2.13 Install Plastic Sample Train Assembly

Open cover and unplug power cable, to cover will stay open.

Open front door and remove shipping funnel or completed sample container by pushing up out of chimney. Follow approved protocol.

Insert new assembled sample train through chimney.

Restore power to close cover.

Be sure cover closes firmly on funnel and sample container is in place.

Close sampler front door.

2.14 Check alignment of cover on top of funnel

Plug power in again and check that moving cover seats properly

2.15 Close and latch sampler

2.16 Final Check Out

Make sure the power cord(s) are connected and secured to underside of sampler.

Wave your fingers between sensor heads to simulate precipitation.

Observe cover opening and resting evenly on splash shield.

In about 2 minutes cover should return to cover sample container.

Check that the cover seats uniformly on the container and seal is complete

3 OPERATION

3.1 Change 1 liter or 1.5 liter plastic general purpose Sample Train

Open sampler cover and disconnect power.

Open sampler door.

Push bottle and funnel assembly up and out through the chimney. Handle sample bottle in accordance with applicable protocols.

Replace with a new sample assembly following applicable protocol. See Section 2.13

Restore power to sampler

Check that cover opens and closes by waving fingers in the precipitation sensor path.

Close and lock sampler.

3.2 Change GLASS Sample Train

Open sampler cover and disconnect power.

Open sampler door.

Rotate bottle/tray assembly clockwise to lower as far as it will go. Handle sample train in accordance with applicable protocols.*

Remove funnel and capillary assembly carefully and return with sample bottle to the laboratory.

Install cleaned glass funnel and capillary assembly in top and place bottle on tray. There will be a gap of about ½ to ¾ " between top of bottle and capillary bulb.

Reconnect power and close cover so it seats firmly on funnel.

Raise the bottle/tray assembly by turning counter-clockwise until bottle top just contacts the capillary bulb.

BE SURE TO ASSEMBLE IN THIS ORDER TO AVOID POSSIBLE DAMAGE TO THE GLASS CAPILLARY.

Check that cover opens and closes by waving fingers in the precipitation sensor path

3.3 Bulk Sample Operation

This procedure will be followed in the event of a power failure or failure of the sampler to open automatically.

Disconnect power from the underside of the sampler and hang connector end over splash shield support.

Loosen the four ¼-20 socket cap screws in motor drive (lower end of drive arm).

Swing the cover up and to fully open position, resting on splash shield. DO NOT RETIGHTEN THE SOCKET CAP SCREWS until ready to return to automatic operation.

When power is restored, motor will automatically return to closed position, but cover will not rise.

To return to automatic operation, swing cover assembly to closed position with cover on top of funnel. Press cover down firmly and retighten the socket cap screws on the motor drive end of the arms.

* See MDN project specific SOP-MDN-01, available from Frontier Geosciences

4 SERVICE & REPAIR

4.1 Sensor maintenance (weekly)

Check that there are no spiders, webs or leaf particles sensor.

Wipe with a clean cloth or tissue as required.

4.2 General Cleaning:

Check that there is no build up of bird droppings or other material on the splash shield and moving cover. Wipe clean.

Spray clean or wipe off dirt or dust streaks as needed.

4.3 Change Lid Seal (Twice a Year)

Open sampler about half way and disconnect power.

Loosen, but do not remove, wing nuts on one side of lid seal clamp and pull out one side of lid seal.

Loosen, but do not remove, wing nuts on other side and remove lid seal.

Smooth out new lid seal and secure with clamp on one end. Tighten wing nuts.

Press the lid seal toward other end and push edge under clamp until seal is smooth. Tighten wing nuts.

Clean the new lid seal with a clean cloth and de-ionized water and dry.

Reconnect the power and allow sampler to close on top of funnel.

Check that lid seal rests evenly on funnel.

4.4 Change Sensor (if required)

DIP – switch-off delay (1 = ON)					DIP – drop incidences – filter 1= ON				
S1	S2	S3	S4	Time (sec)	S1	S2	S3	S4	drops
1	0	0	0	25	1	0	0	0	1
0	1	0	0	50	0	1	0	0	2
1	1	0	0	75	1	1	0	0	3
0	0	1	0	100	0	0	1	0	4
1	0	1	0	125	1	0	1	0	5
0	1	1	0	150	0	1	1	0	6
1	1	1	0	175	1	1	1	0	7
0	0	0	1	200	0	0	0	1	8
1	0	0	1	225	1	0	0	1	9
0	1	0	1	250	0	1	0	1	10
1	1	0	1	275	1	1	0	1	11
0	0	1	1	300	0	0	1	1	12
1	0	1	1	325	1	0	1	1	13
0	1	1	1	350	0	1	1	1	14
1	1	1	1	375	1	1	1	1	15

DIP – switch adjustment

Factory settings: switch off delay 25 sec.
drop incidences: 5

If this setting is to be changed, the **switch-off delay,** and the number of **drop incidences** are set through the DIP-switches acc. to the table.

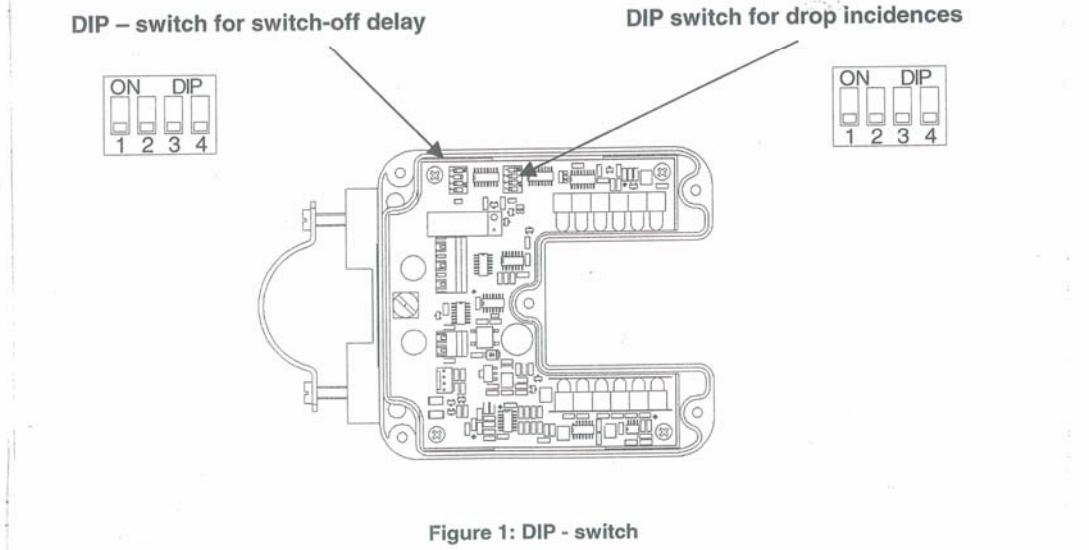


Figure 1: DIP - switch

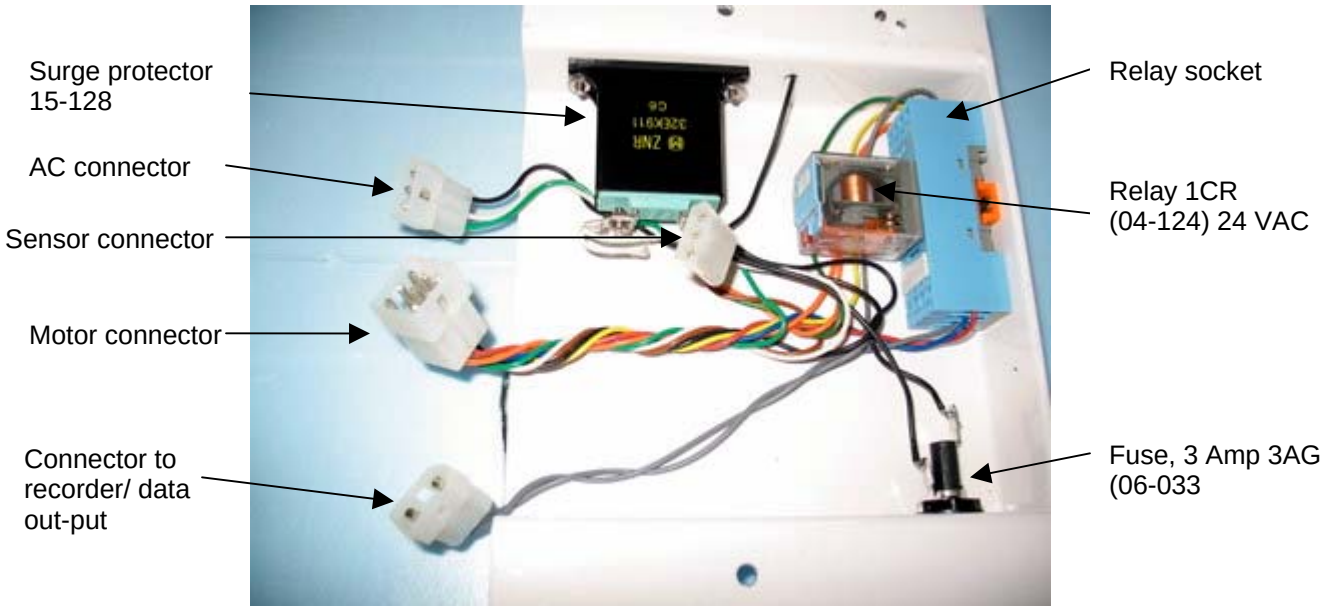
5 TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	CHECK	REQUIRED ACTION
Sampler will not open	No power to sampler	Fuses and ground fault interrupter (GFI) Power cords properly connected.	Replace as necessary. Reconnect.
Sampler opens under non-precipitation conditions. False opening	Insect on precipitation sensor transmitter or receiver lenses. Dust or leaf material on lenses	Presence of spiders or other insects or bits of grass or leaf.	Wipe off lenses with a tissue. If necessary apply insect repellent to under side of transmitter and receiver shields. Avoid spraying on the lenses.
No output to rain gage or recorder	Cable not connected or a broken wire Defective contact in 1CR relay	Check connections and continuity Check continuity	Connect or replace cable Replace relay 1CR (04-124)

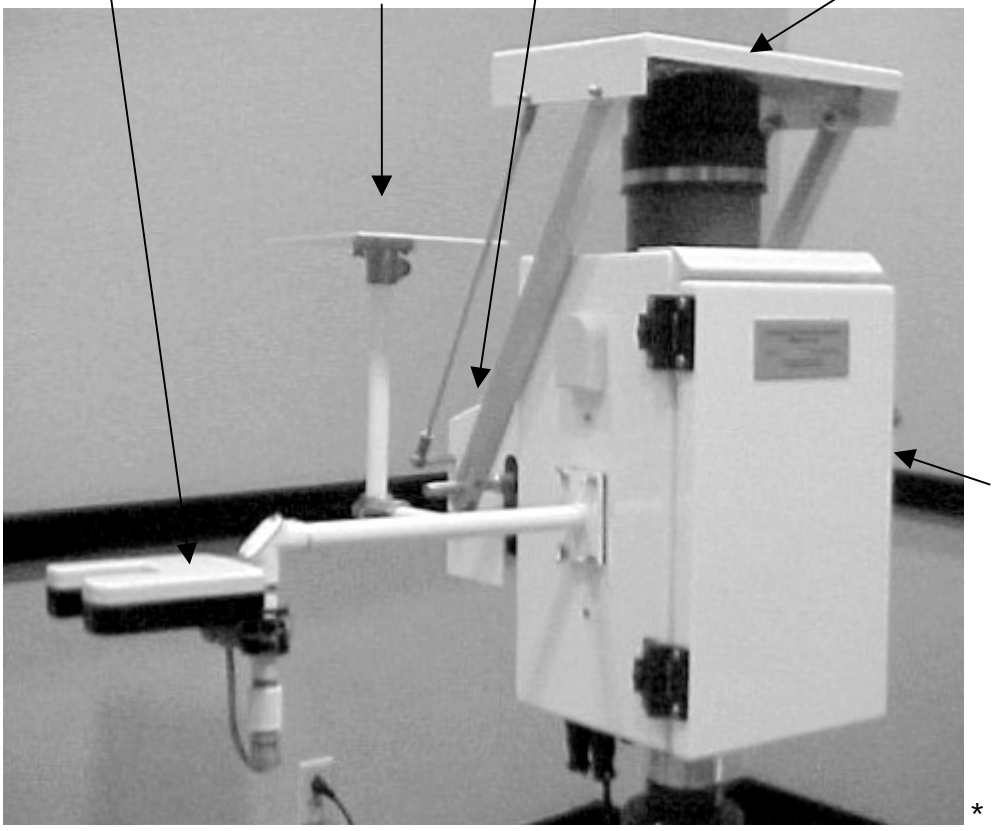
6 ILLUSTRATIONS

6.1 Inside of Control

6.1.1 Surge protector (15-128)
6.1.2 Connector to AC power: 3pin Male, Male pins Black–White-Green
6.1.3 Connector to motor: 9pin Male, male pins black, white, green, red, blue, brown & orange
6.1.4 Connector to recorder output: 3pin female, female pins gray x gray
6.1.5 Connector to Sensor: 3pin Male, male pins, blue, brown, green/yellow
6.1.6 Relay socket
6.1.7 Relay 1CR (04-124) 24 VAC
6.1.8 Fuse, 3 Amp 3AG (06-033)



6.2 General View with Cover closed



* Thermo-electric chiller may be supplied in place of standard cooling fan.

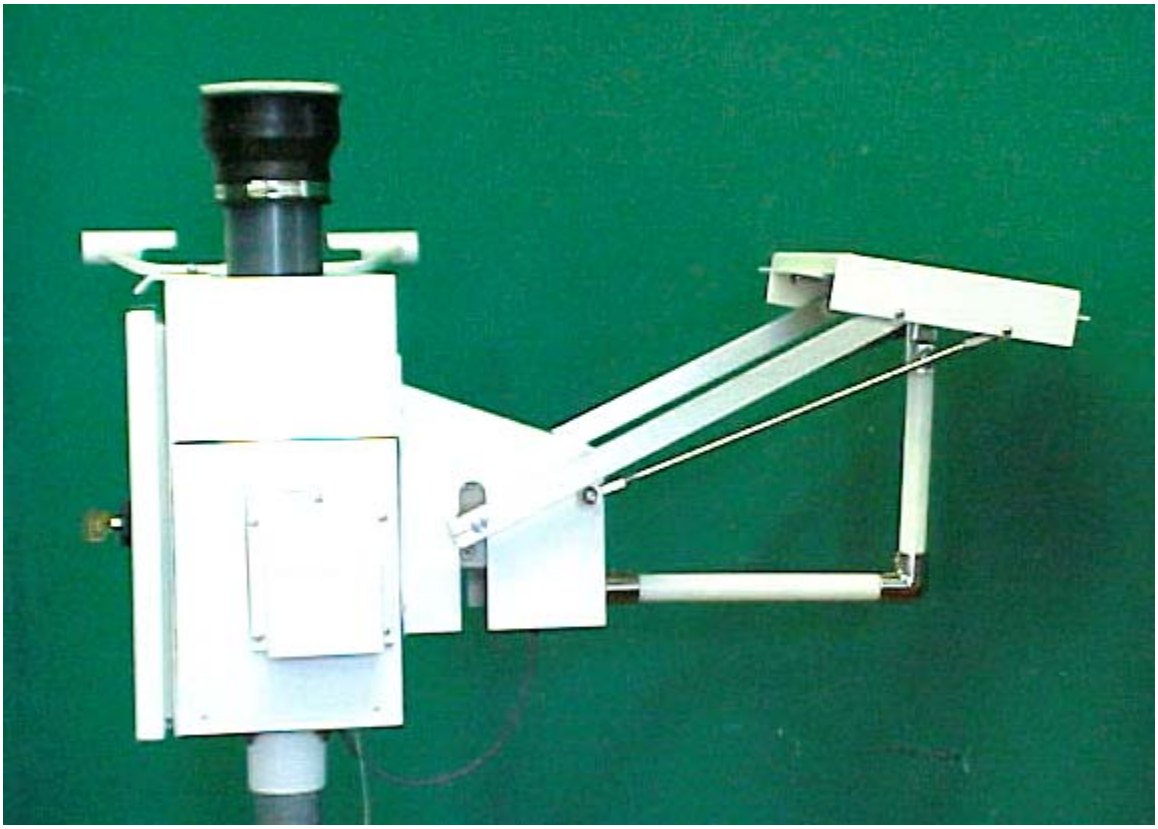
6.3 Optional Thermoelectric chiller in place of cooling fan

For areas with extreme heat.

Thermoelectric chiller installed in place of standard fan cooling. Stainless steel exterior.

Must be ordered with original unit.

6.4 Sampler open (moving cover resting on splash shield)



6.5 Sampler opened, showing cover closed on general purpose sample container

Plastic 1.5 liter sample train. Held in place by screw cap on funnel.
Flat panel in rear provides thermostatically controlled heating
Exhaust fan on right side controlled by thermostat.
May be provided with optional thermo-electric cooling

6.6 Glass Sample Train showing capillary bulb resting on bottle top

Bottle support tray rotates to align and adjust bottle height to capillary.

7 PARTS LIST

ITEM #	NAME: DESCRIPTION	ASSEMBLY #	COMPONENT #	PART #	QTY.
N	HOUSING ASSEMBLY MDN	H00-125-1	**--**	**--**	**1**
1-1	Housing, MDN	--	01-112-X	--	1
1-2	Ventilator	--	01-069	--	1
1-3	6-32 x 5/8 BHSS	--	23-0632-10-1	--	3
1-4	Amp, 9 pin case connector	--	06-706	--	2
-5	Amp pin 18-14	--	06-724	--	5
1-6	Amp, 4 pin case connector	--	06-700	--	1
1-7	Amp cap, 4 pin	--	06-711	--	1
1-8	4-40x1/2 BHSS	--	23-0440-08-1	--	6
1-9	4-40 hex nut	--	23-0440-91-0	--	6
1-10	#4 internal tooth lock washer	--	23-0440-93-0	--	6
1-11	Mounting flange	--	01-065	--	1
1-12	Bolt, 5/16-18x1’	--	23-51618-16-7	--	4
1-13	Nut, Hex 5/16-18 SS	--	23-51618-90	--	4
1-14	Washer, 5/16	--	23-51618-93	--	4
1-15	Drip shield	--	01-114-X	--	1
1-16	10-32 X3/8 seal screw, SS	--	23-1032-06-8	--	2
1-17	Chimney, MDN 125-2	--	01-095-17	--	1
1-18	8-32 X1/2 BHSS	--	23-0832-08-1	--	6
1-19	Flex Funnel Holder	--	12-095-17	--	1
1-20	Stand-off ½ x 10-32 male/female	--	23-1032-16-s	--	4
1-21	10-32 X 3/8 BHSS	--	23-0832-06-1	--	4
1-22	Panel, inner MDN	--	01-117	--	1
1-23	Heater, silicone, MDN	--	17-129	--	1
1-24	Molex, 3 pin female	--	06-009	--	1
1-25	Molex pin, female	--	06-013	--	2
1-26	10-32 hex nut	--	23-1032-91-0	--	4
1-27	10-32 lock washer	--	23-1032-93-0	--	4
1-28	#10 wing nut	--	23-1032-91-3	--	4
1-29	#10 int. tooth lock washer	--	23-1032-93-0	--	4
1-30	Insulation set, MDN	--	17-100	--	1
1-31	Bottle Support Assembly, round	20-125	--	--	1
2	**DOOR ASSEMBLY, MDN 125-2**	**H00-125-2**	**--**	**--**	**1**
2-1	Door, MDN 125-2	--	01-113-X	--	1
2-2	Latch & strike, door	--	01-846	--	1
2-3	Hasp, door latch	--	01-848	--	2
2-4	Hinge, large	--	01-025	--	2
2-5	10-32 X ½ BHSS	--	23-1032-08-1	--	8
2-6	10-32x 3/8 BHSS	--	23-1032-06-1	--	4
2-7	#10 internal tooth lock washer	--	23-1032-93-0	--	4
2-8	Gasket, MDN door	--	16-060	--	4 ft
2-9	Insulation, MDN 125-2 door	--	17-101	--	1
2-10	Label, MDN metal photo	--	02-125	--	1
3	**MOTOR ASSY. WITH CABLE**	**H00-125-3**	**--**	**--**	**1;**
3-1	Motor	--	07-250-90	--	1
3-2	Transformer	--	07-255	--	1
3-3	10-32 hex nuts	--	23-1032-91-0	--	4
3-4	10-32 lock washer	--	23-1032-93-0	--	4
3-5	¼-20 flat washer	--	23-1420-92-0	--	4
3-6	10-32 X 5/8 bhss	--	23-1032-10-1	--	4

3-7	Axel, motor drive MDN	--	09-130	--	2
3-8	10-32 X ¼ socket head set screw	--	23-1032-03-4	--	4
3-9	¼-20X3/4" socket head cap screw	--	23-1420-12-4	--	4
3-10	Arm, ADS/MDN cover	--	09-122-1	--	2
3-11	Cable, 20wire 8 strand	--	W20-8	--	3 ft
3-12	Amp cable connector 9 pin	--	06-708	--	1
3-13	Amp 9pin cable clamp	--	06-709	--	1
3-14	Amp socket	--	06-725	--	8
3-15	Push on .187 full insulation	--	23-4-187F	--	6
3-16	Motor cover, MDN	--	01-089	--	1
3-17	8-32 X3/8 BHSS	--	23-0832-06-1	--	5
3-18	#10 int. tooth lock washer	--	23-1032-93-0	--	2
3-19	10-32 Hex nut	--	23-1032-91-0	--	2
3-20	Gasket, motor cover	--	16-138	--	1
3-21	8-32 x3/8 BHSS	--	23-0832-06-1	--	4
3-22	Standoff, ½ hex 1.5" 10-32	--	23-1032-24-94	--	2
3-23	Arm rod, adjust 14.5	--	09-144-14.50	--	2
3-24	Rod end, ¼-28 female right hand	--	09-140	--	2
3-25	Rod end, ¼-28 female left hand	--	09-141	--	2
3-26	Hex nut, ¼-28	--	23-1428-91-0	--	2
3-27	Hex nut, ¼-28 left hand	--	23-1428-91-l	--	2
3-28	Shoulder screw, 10-32 x1/4x3/8	--	09-081	--	4
3-29	Spade, no insulation #16 10 stud	--	23-4-1609	--	1
4	**MOVING COVER ASSY., MDN**	**H00-125-4**	**--**	**--**	**1**
4-1	Cover, moving	--	01-086-2-X	--	1
4-2	Bearing, cover MDN	--	09-123	--	4
4-3	Lid seal clamp	--	16-127	--	2
4-4	Lid seal for MDN sampler	--	16-129	--	1
4-5	Teflon/fiberglass sheet	--	16-139	--	1
4-6	8-32X1-1/8 BHSS screw	--	23-0832-18-1	--	4
4-7	8-32 hex stop nut	--	23-0832-95-0	--	4
4-8	8-32 wing nut	--	23-0832-91-3	--	4
4-9	#8 int. tooth lock washer	--	23-0832-93-0	--	4
4-10	10-32X 3.8 BHSS screw	--	23-1032-06-1	--	4
4-11	10-32 X1/4 cup pt set screw	--	23-1032-04-5	--	2
4-12	Shoulder screw, 10-32 x1/4/x 1	--	09-083	--	2
4-13	10-32 Acorn cap nut	--	23-1032-91-6	--	4
5	**MDN SPLASH SHIELD ASSY.**	**H00-125-5**	**--**		**1**
5-1	Splash Shield MDN	--	01-093	--	1
5-2	T fixed, support shield	--	01-047	**--**	1
5-3	Support Flange	--	01-059	--	2
5-4	Support horizontal, Delrin	--	01-047H	--	1
5-5	Support vertical, Delrin	--	01-047V	--	1
5-6	10-32X3/4 BHSS	--	23-1032-12-1	--	4
5-7	10-32 hex nut SS	--	23-1032-91-0		4
5-8	#10 int. tooth lock washer	--	23-1032-93-0		4
6	**EXHAUST FAN SUB-ASSEMBLY**	**H00-125-6**	**--**		**1**
6-1	Support panel, MDN fan	--	01-100	--	1
6-2	Gasket, MDN fan panel	--	16-140	--	1
6-3	Fan hood, MDN	--	01-087	--	1
6-4	Gasket, fan hood	--	16-137	--	1

6-5	8-32X3/8 BHSS	--	23-0832-06-1	--	5
6-6	Fan, 80mm 1”	--	07-706	--	1
6-7	Fan Filter 3-1/8	--	07-713	--	1
6-8	6-32 X 1/2” BHSS	--	23-0632-08-1	--	4
6-9	6-32 hex nut	--	23-0632-91-0	--	4
6-10	6-32 lock washer	--	23-0632-93-0	--	4
6-11	Molex 3pin female	--	06-009	--	1
6-12	Molex pin, female	--	06-013	--	2
7	**SENSOR ASSEMBLY, THIESI**	**M00-125-5**	**--**	**--**	**1**
7-1	Sensor, Precipitation	--	05-320	--	1
7-2	Attachment, Sensor	--	01-076	--	1
7-3	Molex 3pin female		06-009	--	1
7-4	Molex pin, female		06-013	--	2
8-	**CONTROL ASSEMBLY**	**M00-125-4**	**--**	**--**	**1**
8-1	Control chassis		01-088	--	1
8-2	Fuse holder		06-168	--	1
8-3	Fuse, 10 amp		06-031	--	1
8-4	Din rail 2.75”		06-512-2	--	1
8-5	Thermostat NC (Heater)		17-160	--	1
8-6	Thermostat NO (Cooling)		17-170	--	1
8-7	Molex, 3 pin male		06-008	--	3
8-8	Molex, 3 pin female		06-009	--	1
8-9	Molex, 9 pin female	**--**	06-011	--	1
8-10	Molex pin, male	--	06-012	--	17
8-11	Molex pin, female	--	06-013	--	2
8-12	Surge protector	--	15-128	--	1
8-13	Relay, DPDT 24 VAC	--	04-125	--	1
8-14	Relay socket	--	04-126	--	1
8-15	6-32 x ¼ bhss	--	23-0632-04-	--	2
8-16	Spade	--	23-4-1608	--	3
8-17	10-32 x ¼ bhss	--	23-1032-04-1	--	1
9	**AC CABLE**	**--**	**--**	**15-504**	**1**
10	**OUTPUT CABLE, DRY CONTACT**	**--**	**--**	**15-414**	**1**

8 SPARE PART PRICE LIST

04-125	Relay, 4 pole double throw, 24 VAC	17.00
05-320	Precipitation sensor assembly, Thies optical	1,375.00
07-250	Motor for cover drive	671.13
07-255	Transformer, MDN motor	123.75
15-127	Power surge protector	90.00
15-414	Recorder out-put cable	25.00
15-504	AC power cable	25.00
16-122	Lid Seal for Moving Cover (for sample container)	21.00
23-1032-16-4	10-32x1” Socket head cap screw, (arm attachment)	1.25
22-120	Manual, MDN Atmospheric Deposition Sampler	15.00

Prices subject to change without notice. Please contact N-Con Systems Co., Inc. for current prices or parts that are not listed

9 LIMITED WARRANTY

WHAT IS COVERED

N-CON Systems, Co. Inc. warrants that the product you have purchased will be free of defects in materials and workmanship.

FOR HOW LONG

This warranty covers all defects that you bring to the attention of N-CON Systems within ONE YEAR FROM DATE OF PURCHASE.

WHAT N-CON SYSTEMS WILL DO

If your N-CON product is defective we will repair or replace it and will ship it back (UPS Ground) to you free of charge. If UPS Blue or RED air is required, you will be charged the difference between air service and ground service to the same destination.

HOW TO GET SERVICE

Please call 1-800-932-6266 to OBTAIN RETURN AUTHORIZATION. You must return your N-CON product within one year of the date of purchase, shipping prepaid, to our factory at this address:

N-CON Systems Company, Inc. (Mail & Purchase Orders: P.O. Box 809)
Warranty Repair Service
180 North Street
Crawford, GA 30630

In any correspondence with us, or if you send part, but not all the product, please include both Model and Serial # of the product.

WHAT THIS WARRANTY DOES NOT COVER

Your rights and remedies are specifically limited to those set forth in this warranty.

N-CON Systems disclaims any and all implied warranties including those of mercantability or fitness for a specific purpose. N-CON Systems shall not be liable for any special, incidental, or consequential damages. In no event shall N-CON Systems liability to you exceed the purchase of your N-CON product.