



MDN Motorbox Replacement, ACM Collector

Items needed:

- Replacement motorbox
- Small and medium-sized, straight blade screwdriver
- Small and medium-sized, Phillips head screwdriver
- Small adjustable wrench or 7/16" wrench or socket
- Pliers (small)
- MDN Observer Form (MOF) for current week's sample

Instructions:

If unfamiliar with the parts of the collector, review the diagrams in the Appendix to this document.

1. Disconnect power to the collector (i.e., unplug the power cord outside the collector) and unplug the motorbox from the AC outlet inside the collector.



2. Disconnect the sensor from the motorbox by unscrewing the connector from the motorbox.



3. Remove the clutch arm bolt and associated hardware from the push rod and motorbox. The push rod will swing free. Save the bolt, washers (2, bronze and nylon), and the bronze bushing to re-use when installing the replacement motorbox.



4. Remove the dry-side bucket and place it upside down inside the collector under the motorbox.
5. Place the lab jack on top of the inverted dry-side bucket and adjust the lab jack so that it will support the motorbox when the motorbox mounting bolts are removed.



6. Remove the screws (4) that secure the motorbox to the top of the collector (see arrows in the image below). The 4th screw is located inside the bucket holder for the dry-side bucket.

Be careful not to drop or misplace the screws as they will be re-used with the replacement motorbox.

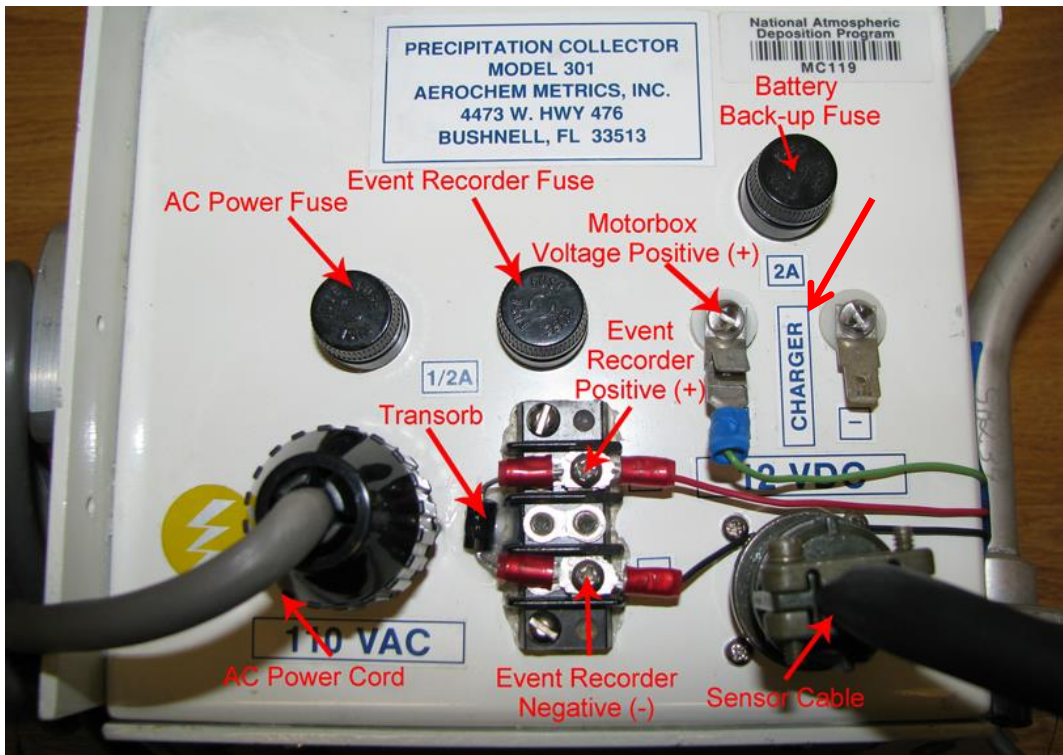
bucket holder



7. Lower the lab jack and remove the motorbox. Remember to support the motorbox with one hand while lowering the lab jack to prevent the motorbox from falling.

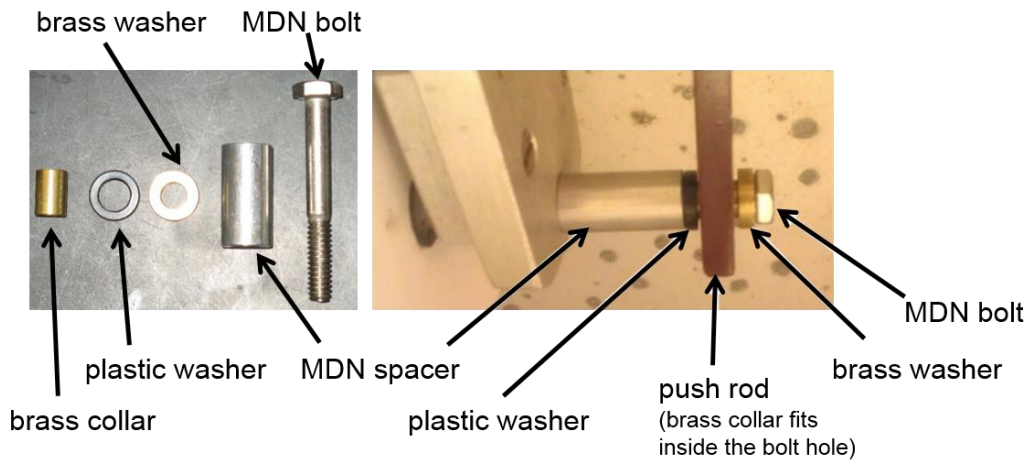


- Place the motorbox in the bottom of the collector and disconnect the wires (positive and negative) for the event recorder from the motorbox.



- Set the old motorbox aside for return to the NADP Network Equipment Depot (NED).
- Retrieve the new/replacement motorbox.
- Attach wires for the event recorder to the replacement motorbox.
- Place the motorbox on the lab jack and raise the lab jack, aligning the holes for the mounting screws.
- Secure the motorbox to the top of the collector using the screws from Step 6.
- Lower the lab jack and return it to its location under the chimneys.
- Return the dry side bucket to its holder on top of the collector.

16. Using hardware from Step 3, attach the clutch arm bolt to the push rod and the motorbox.
 Do not over tighten the bolt.



17. Verify that the push rod is straight and secure.
18. Re-attach the sensor cable to the motorbox. Align the sensor connector with the motorbox connector. Tighten the connector to secure the cable to the motorbox.



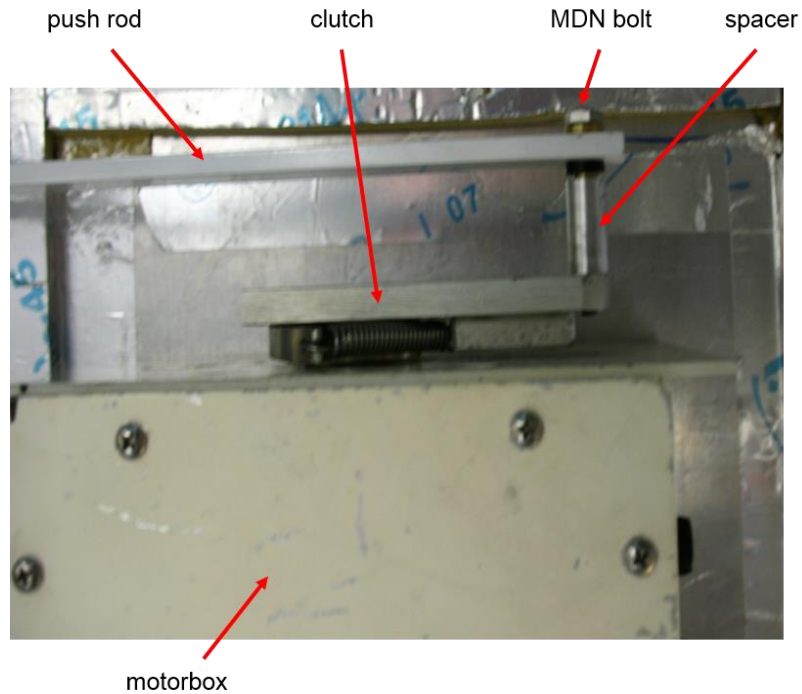
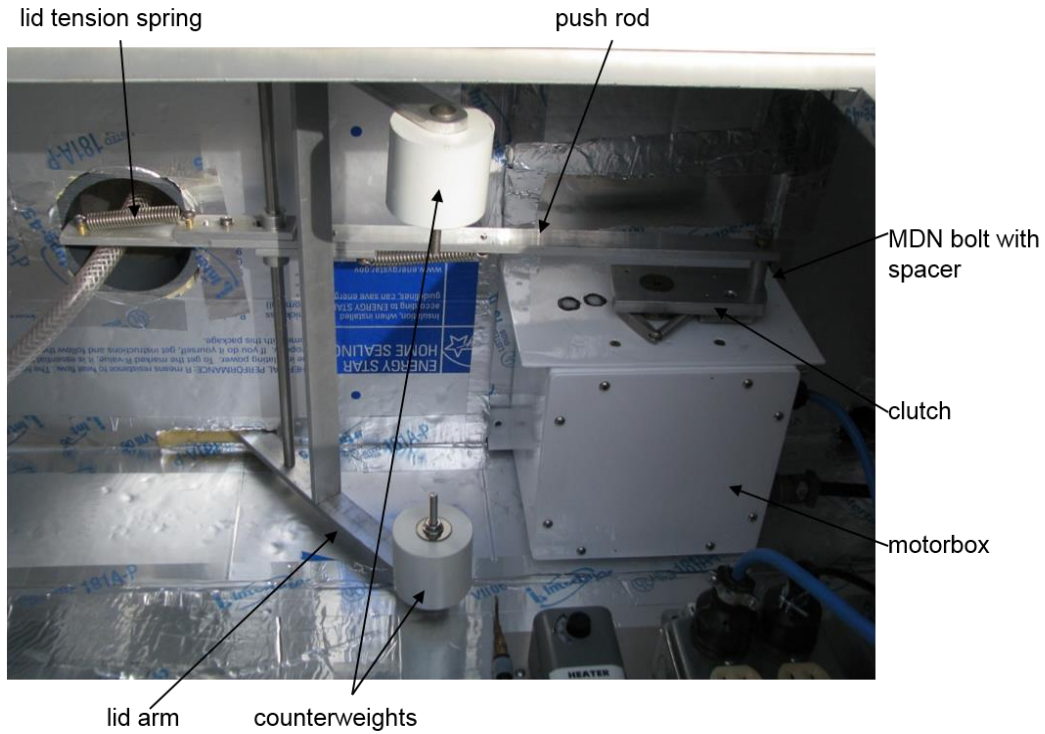
19. Record comment in Block 9 (**Remarks**) of the MDN Observer Form (MOF).

9. REMARKS	<i>For example: equipment malfunction, extreme weather conditions, contamination, farming, burning, logging, leakage, etc.</i>
<i>Motorbox replaced at 8:45 am on 07/03/2012.</i>	

20. Return the old motorbox to the NED. Include a note describing the problem with the motorbox.

NADP Network Equipment Depot
 Wisconsin State Laboratory of Hygiene
 465 Henry Mall
 Madison, WI 53706

Appendix



Underside of the ACM collector (top photo), and the ACM motorbox (bottom photo) with parts labeled.