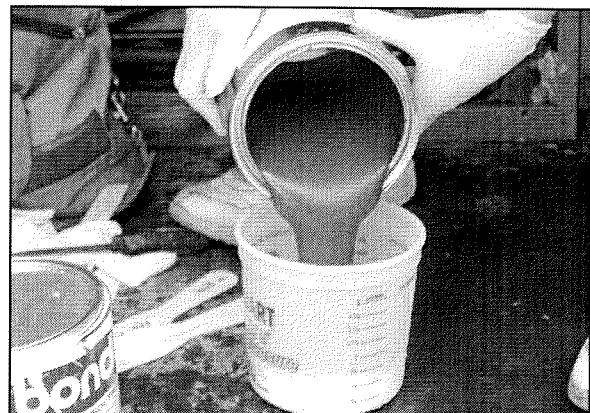


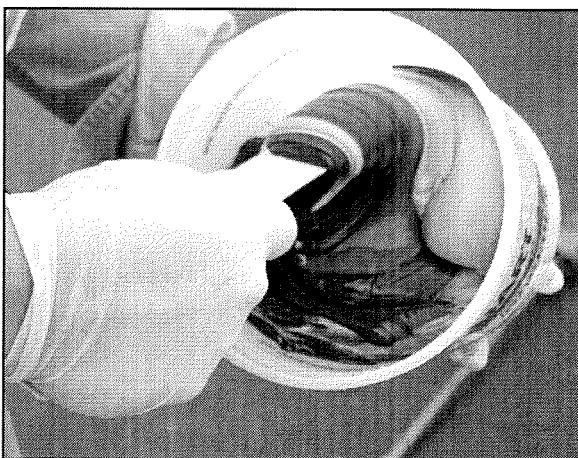
PLACE YOUR GLOVES ON AT THIS TIME FOR ALL STEPS INVOLVING BONDO.



STEP 10 - Pour one quart of Bondo epoxy PART A into a disposable bucket.



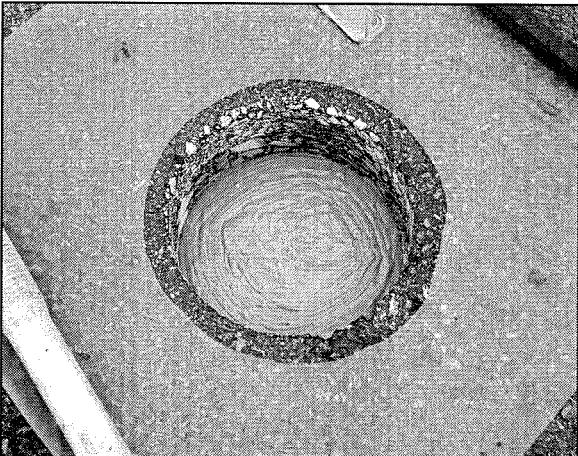
STEP 11 - Pour one quart of Bondo epoxy PART B into the disposable bucket.



STEP 12 - Mix thoroughly and quickly.



STEP 13 - Immediately pour the epoxy mixture into the hole.



CRITICAL ALIGNMENT!



NOTE - After the Bondo settles out, approximately 1/3 of the hole should be full.

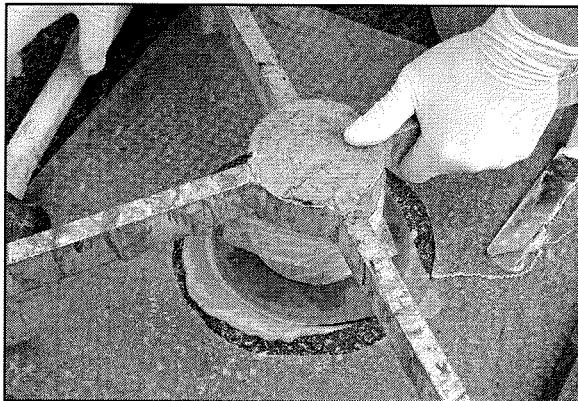


STEP 14 - Take the Groundhog canister and place it in the ground according to the "TRAFFIC FORWARD" sticker.

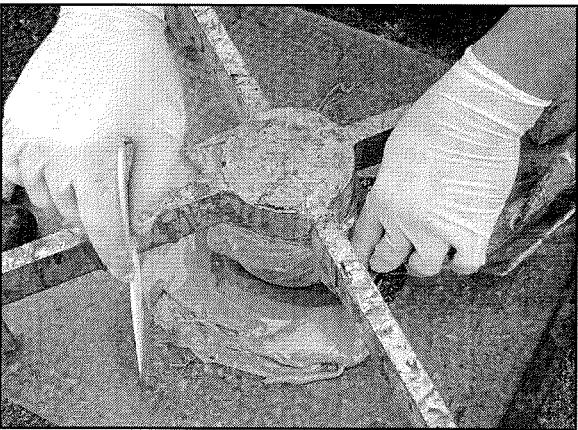
Installation Procedure for the Groundhog® G-4 Permanent Traffic Analyzer



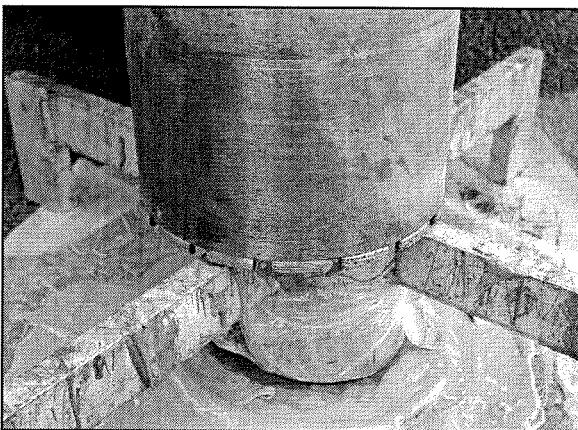
STEP 15 - Push the Groundhog canister down into the hole. The canister should be no more than 1/8" below the surface of the road. DO NOT EXTEND ABOVE THE ROAD. If necessary, add additional epoxy so that the perimeter around the canister has no sink marks.



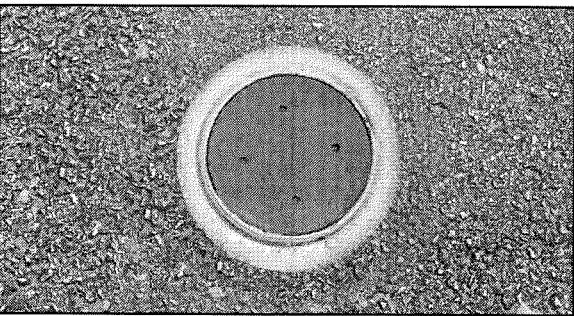
STEP 16 - Use the canister installation tool to apply pressure as needed to position the canister just below the road surface. (Remember the canister must not be positioned more than 1/8" below the road surface)



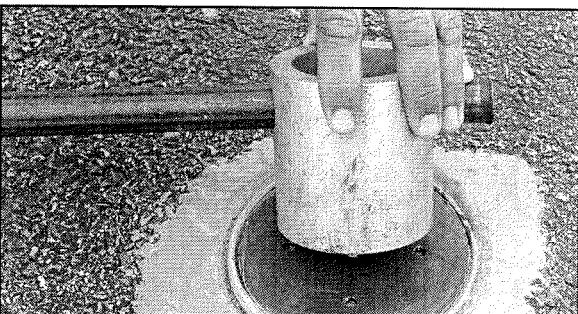
STEP 17 - Once some of the epoxy squeezes out around the Groundhog case, take a putty knife and spread the epoxy around the outer edge of the canister.



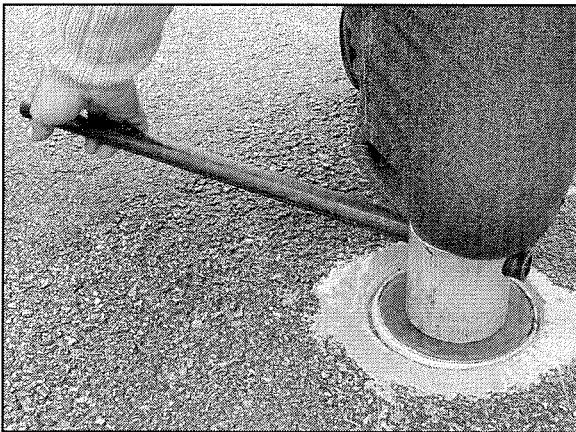
STEP 18 - At this point, it is recommended to position the core drill unit over the 'spider' tool. This will help maintain a constant pressure as the epoxy hardens.



STEP 19 - Once the epoxy has stiffened, remove the clear plastic film from around the Groundhog canister. With your gloves on, gently press down the edges of the epoxy as shown. The clear plastic cover over the lid of the groundhog should also be removed at this time. While the epoxy is pliable, verify that no epoxy is covering the perimeter of the lid.



STEP 20 - After the epoxy has thoroughly hardened, you may take the Nu-Metrics Groundhog® lid removal tool and line up the four holes on the lid of the Groundhog case. Gently turn counter-clockwise to remove the lid. (If the electronics were pre-installed skip the remainder of the steps)

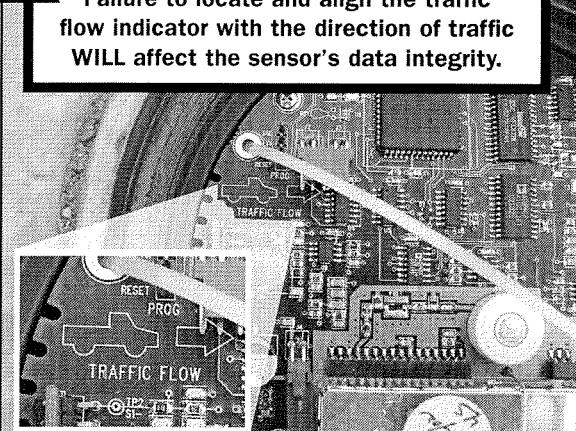


TIP: Center your body weight by placing a knee in the center of the lid tool. This will help maintain leverage as the lid is removed.



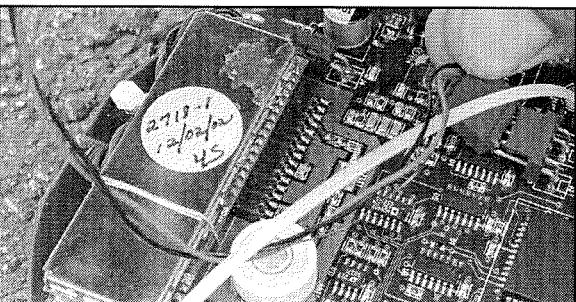
CAUTION!

Failure to locate and align the traffic flow indicator with the direction of traffic
WILL affect the sensor's data integrity.

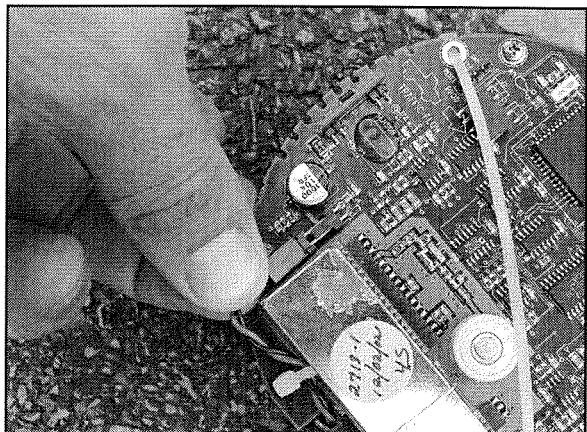


STEP 22 - Before positioning the circuit board inside the canister, locate the traffic flow indicator that is printed on the circuit board. Align the traffic flow indicator with the direction of traffic.

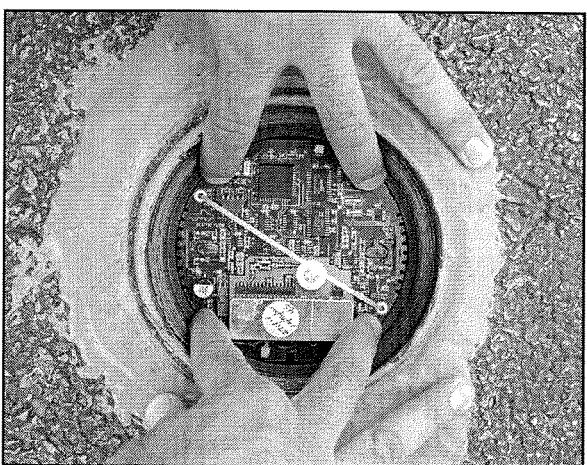
IF USING A WEATHER LID...



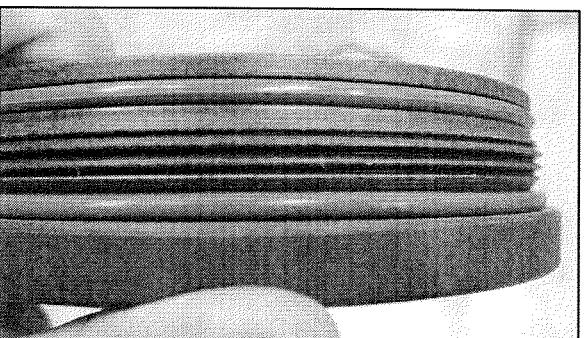
STEP 24 - If installing a weather lid, it is very important to wrap the lid wires around the installation strap ONCE. This will keep the wires from twisting unpredictably inside the canister.



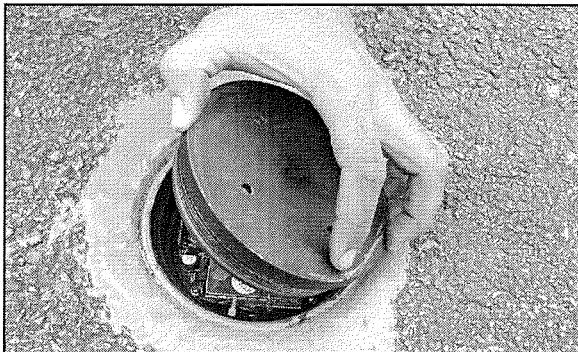
STEP 21 - Plug the battery lead wire into the circuit board. This will turn the unit ON, and prepare it for data collection.



STEP 23 - Using the installation strap, place the circuit board and battery pack assembly into the canister with the traffic flow indicator pointed in the appropriate direction. Press the circuit board firmly into the canister to secure the rubber grommets against the inside of the canister.



STEP 25 - Before placing the lid back on, verify that both o-rings are lubricated (with a petroleum based jelly) and that there are no signs of tears or chips out of the rubber.



STEP 25 - Place lid on canister. →

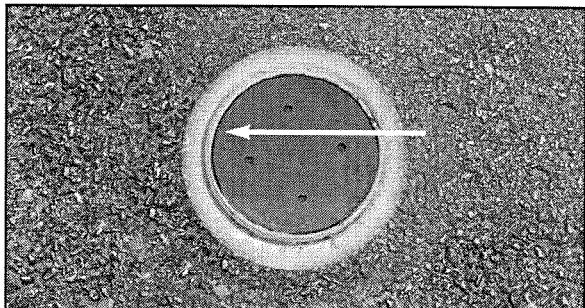


STEP 25 - Place lid on canister. →

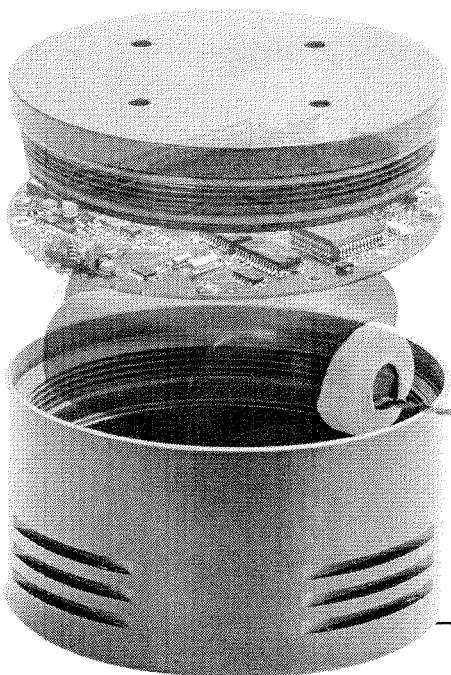


STEP 26 - Secure lid by tightening with lid tool.

TIP: Place the lid on top of the threads and turn in the same direction as if you were removing the lid. This will eventually produce a 'click'. Stop when you hear this click and then proceed to tighten in the opposite direction. This will ensure a good seat for tightening.



LAST STEP - Nu-Metrics strongly recommends that the installer place a bead of silicon around the lid into the small space between the lid and the canister. This helps prevent road debris from causing damage to o-rings and internal components.



GROUNDHOG LID
with dual o-rings

ELECTRONICS

BATTERY PACK

GROUNDHOG CANISTER

TROUBLESHOOTING PERMANENT COUNT STATION

Tools Required: Analog telephone Voltmeter / Digital Multimeter

THIS CHECKLIST APPLIES TO A SITE POWERED BY AC POWER!

ADDENDUM

1. CHECK POWER STATUS OF THE CABINET

- Verify the site has AC electrical power.
- Verify the circuit breaker has not tripped.
- Reset the circuit breaker, switch OFF then back ON.
- Check the green status LED is ON for the surge arrestor (the surge arrestor has a bright yellow front with an LED in the center).
- Use a voltmeter to check the AC power.
- Place the voltmeter test leads across the 2 terminals where the label reads "connect incoming power here", the voltage should be between 100 and 130 volts.
- If the AC voltage is not between 100 and 130 volts, the AC is not functioning properly. Consult a certified electrician to troubleshoot the malfunction.
- When the AC power is between 100 and 130 volts, it is working properly.
- Verify the equipment cabinet has DC power.
- Locate the 4 position terminal block near the center of the back panel.
- Use a voltmeter to check the DC voltage level.
- Place the voltmeter test leads across the two terminals where the red and black wires are connected. (Be sure to change your voltmeter from AC to DC voltage)
- The voltage should be between 11 and 13 volts.

2. CHECK RFM STATUS

- View the RFM and verify that the power LED is ON.
- Check the modem connection to make sure that it is securely connected to the port marked (Data B).
- Check antenna connection to verify it is tight.
- Check code in the RFM (technician must be familiar with this operation) and verify correct code for the site number.

3. CHECK AND VERIFY CURRENT PHONE LINE STATUS

- Check for dial tone.
- Locate the modem inside the equipment enclosure.
- Plug a standard analog telephone into the port marked "PHONE" on back of modem.
- Listen for a dial tone and/or excessive noise conditions (clear tone with no buzzing or crackling noise on the line).

4. CHECK THE ANALOG DATA MODEM

- Check the connection from the modem to the RFM (make sure the connection cable is securely fastened to the modem).
- Check the power connection to the modem (make sure the connection is securely fastened to the modem).
- Verify the power button on the modem is "pushed in" (this is the ON position).
- Check for status LED on the front of the modem.
- While the modem is idle, verify that three LED's are lit. The LED marked "TR" (red), "CS" (red), and "MR"(green) are needed for proper operation.

LIMITED WARRANTY

GENERAL COVERAGE:

This Nu-Metrics system, but not items or computer products covered by other manufacturers warranty, is warranted to the owner for a period of one year from the date of original purchase against defects in manufacture or workmanship. This limited warranty is given by Nu-Metrics and not by the distributor or representative from whom the equipment was purchased.

WHAT NU-METRICS WILL DO:

If this system develops a defect in manufacture or workmanship within the one year period, it will be repaired or replaced at our option, providing you supply proof of purchase, date of purchase, and cover all cost of shipping and handling. Nu-Metrics return policy is a 25% restocking fee if returned within 30 days. All equipment must be received in "new" condition, in the original shipping containers, and an RMA (Return Merchandise Authorization) Number must be obtained from Nu-Metrics Customer Service before any return is made.

THE LIMITED WARRANTY DOES NOT COVER:

Nu-Metrics will not repair defects or failures related to servicing not performed by Nu-Metrics or a Nu-Metrics Authorized Service Center. Warranty service will not be provided if your instrument or equipment shows evidence that it has been disassembled, tampered with, damaged, misused, abused, or altered. Nu-Metrics will not provide any warranty service and is not responsible for damages or personal loss due to improper installation or operation. Warranty does not cover vandalism, Acts of God, such as but not limited to lightning damage. Loss of programming, software or data is not covered by this warranty.

LIMITATION OF LIABILITY:

In no event will Nu-Metrics or its developers, directors, officers, employees or affiliates be liable to you for any consequential, incidental or indirect damages (including damages for loss of business profits, business interruption, loss of business information, and the like) arising out of the use of or inability to use the software or hardware or accompanying written materials, even if Nu-Metrics or an authorized Nu-Metrics representative has been advise of the possibility of such damages. Because some states do not allow the exclusion or limitation of incidental or consequential damages, the above limitation may not apply to you.

LIMITED WARRANTY ON MEDIA:

Nu-Metrics warrants the disks on which the software is recorded to be free from defects in materials and faulty workmanship under normal use for a period of ninety (90) days from the date of delivery as evidenced by a copy of the sales invoice. Nu-metrics will, at its option, replace the disk at no charge to you, provided you return the faulty disk with a copy of the sales invoice to Nu-Metrics or an authorized Nu-Metrics Distributor or Representative. Nu-Metrics shall have no responsibility to replace or

refund the purchase price of a disk damaged by accident, abuse, or misapplication. Any implied warranties on the disks, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to 90 days from the date of delivery.

DISCLAIMER OF WARRANTY ON SOFTWARE:

Nu-Metrics software is provided "as is" without warranty of any kind, and Nu-Metrics expressly disclaims all implied warranties, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Nu-Metrics does not warrant, guarantee, or make any representations regarding the use or the results of the use of the software or any accompanying written materials in terms of their correctness, accuracy, reliability, currentness, or otherwise. The entire risk as to the results and performance of the software and written materials is assumed by the user. Nu-Metrics does not warrant that the software will work correctly in your multi-user or network environment. If the software is defective, you (the user), and not Nu-Metrics or its dealers, distributors, agents, or employees, assume the entire cost of all necessary servicing, repair, or correction. Some states do not allow the exclusion of implied warranties, so the above exclusion may not apply to you.

SERVICE OF YOUR EQUIPMENT:

If your equipment or instrument should ever need servicing, please call for a Return Merchandise Authorization (RMA) Number (please have serial numbers and purchase dates available) and then send it, freight prepaid, to an authorized Nu-Metrics Service Center or to:

Nu-Metrics, Inc.
ATTN: Customer Service Dept.
518 University Drive
Uniontown, PA 15401 U.S.A.

Phone: 724-438-8750
Fax: 724-438-8769
www.nu-metrics.com