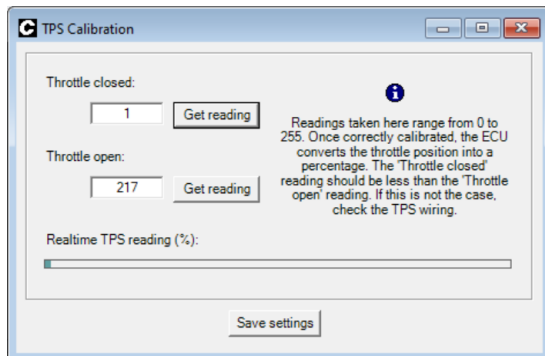
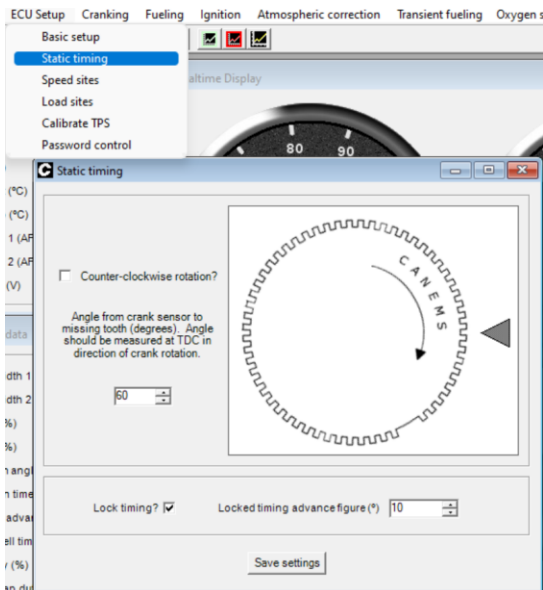


## Startup info and check to do beforehand.

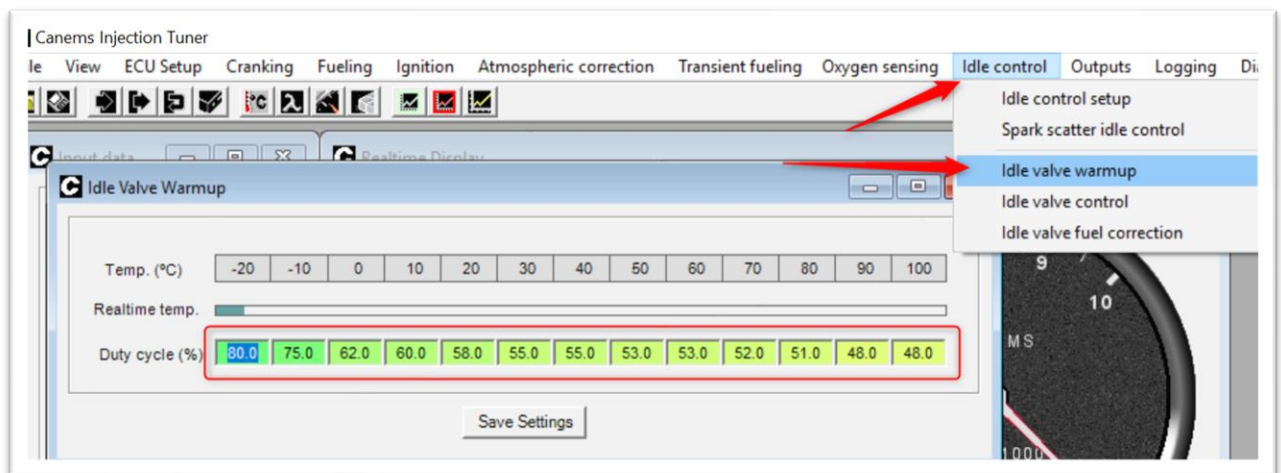
1. Whenever you are taking battery terminals off **PLEASE PULL THE POWER WIRE FUSE FOR THE ECU!**  
This ensures no electrical surges are sent to the ECU, which would damage the internal board.
2. Useful ECU Links
  - a. Injection Manual
    - i. <https://www.thewedgeshop.com/uploads/2/9/8/3/2983741/canems-injection-manual.pdf>
  - b. Install Guide
    - i. [https://www.thewedgeshop.com/uploads/2/9/8/3/2983741/canems\\_rover\\_v8\\_installation\\_guide.pdf](https://www.thewedgeshop.com/uploads/2/9/8/3/2983741/canems_rover_v8_installation_guide.pdf)
  - c. Canems Software
    - i. [https://www.thewedgeshop.com/uploads/2/9/8/3/2983741/canems\\_software.zip](https://www.thewedgeshop.com/uploads/2/9/8/3/2983741/canems_software.zip)
3. O2 sensor installed in exhaust, before cat, roughly 18 inches from manifold collector. Use bung provided.
4. O2 sensor wires to be connected to ECU
5. Intake Air Temp sensor installed in air intake before throttle body. Ideally in a metal pipe that has replaced the MAF sensor
6. Install Canems software onto a PC. A USB stick was provided which has the software on it.
7. Connect to it via provided USB adapter.
8. Power on your car and with the Canems software open ensure the bottom left hand corner has a green light and says Connected to ECU.
9. If you're installing a new cam as well, please ensure you follow the break in procedure.
  - a. Use only non-detergent oil. 20w50 or 10w40 break in oil w/ zinc is recommended. NO SYNTHETIC OIL
  - b. Do no flush motor with oil prior to starting
  - c. Pack oil pump (distributor driven style only) with petroleum jelly
  - d. Run car for 20 minutes at 2000rpms. Do not shut off unless overheating or leaking excessively
10. Before starting, ensure fuel system is working with no leaks
11. Before starting, set TPS per instructions. Ecu setup > calibrate tps. With your foot off the gas, hit get reading for throttle closed. With your foot on the gas all the way down, hit get reading for throttle open. Save settings once done.



- 12.
13. Before starting, lock timing in the ECU to 10 degrees BTDC. Go to ecu setup > static timing



- 14.
15. First start, ensure car stays idling and with your timing light set to 10 BTDC, ensure marks line up on the crank pulley. 10 BDTC is indicated with a white line. If they do not line up, adjust the timing via the ECU (where it says 60 in the picture above). You have to move the numbers and then hit save for them to take. Go one way and see if your timing mark is closer, if not, go the other way. Once you're lined up on 10 BTDC on your timing light and crank pulley, uncheck the locked timing in the ECU and hit save. Save this map by going to File, save calibration.
16. Idle adjustment
  - a. **Step 1. Getting the car to idle**
    - i. Out of the box, your car may start but not idle without holding the throttle.
    - ii. Start by adjusting the duty cycle percentage nearest the current temperature of your car, as indicated by the Realtime temp bar. If car starts and dies out unless you give it gas, adjust the percentages upwards. An adjustment of 5% is quite a lot, so you may start there to see if it helps. Let your car warm up and adjust the duty cycle percentage for each temp range. Generally you can gradually reduce the % as the temperature goes up.



17.
  - a. **Step 2: Fine tuning the idle using the throttle air bleed**
    - i. Once you've got the car idling well across the temps, you can fine tune the idle using the throttle air bleed.
    - ii. Grab a 4.5mm allen and place it in the throttle air bleed. Bring the car to temp (90c, 194f) and then disconnect the Idle Air Control Valve (IAC). If the car might dies right away, turn the allen counter clockwise about 2 turns and try to start the car again, turn allen out farther and repeat if necessary. Continue to turn the IAC counter clockwise until the car is idling about

**144 W. Britannia St., Building 25, Gate 4, Taunton MA 02780**

**1 - 5 0 8 - 8 8 0 - 5 4 4 8 - [contact@thewedgeshop.com](mailto:contact@thewedgeshop.com)**

**<https://www.thewedgeshop.com> & <https://www.twsmotors.com>**

150-200rpms above your target idle speed and with a flick of the throttle comes back down to idle and doesn't die.

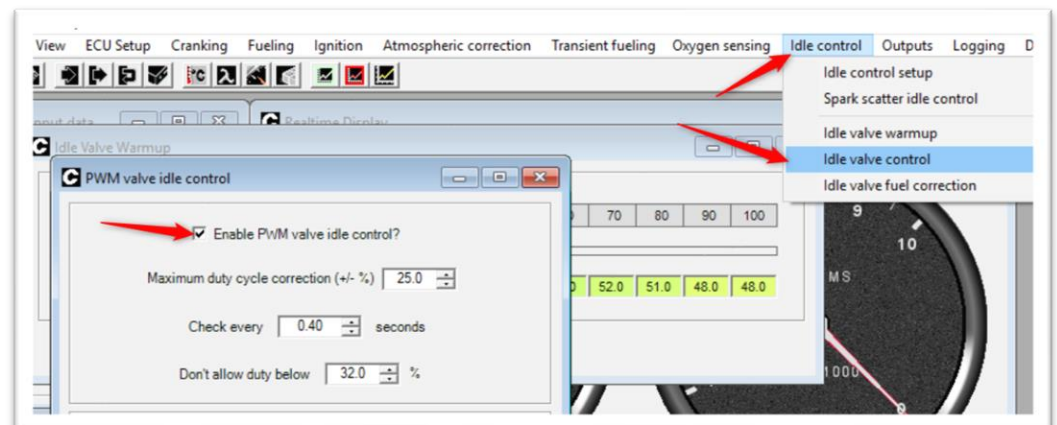
- iii. Now plug your IAC back in, and make any minor adjustments you need to the Idle Valve Warmup settings to get your desired idle speed.



iv.

**b. Step 3: Turn on PWM valve idle control**

- i. This will actively adjust your idle to account of changing driving conditions, ensuring the best idle possible.



ii.