Tuning Theory and Concepts

ADVANTAGE III FORD TUNING THEORY AND CONCEPTS

The second course of SCTU's Ford Certification Program is Advantage Tuning Theory and Concepts. Throughout this course you will build a working knowledge of the common sensors and how they are used in the tuning process. ATTC 1 takes you deep into the Advantage tuning software where you will learn of the Ford tables, functions and scalars that are the key players in a smooth running vehicle. You will also learn the important questions to ask and information to gather before even starting a tune file and the steps to take later on. ATTC 1 is a must know for all serious tuners.

Course Topics
- What is needed to tune.
- Names for the Computer.
- Engine Cycles.
- Sensors:
  - MAF Sensor:
    - Why we tune it.
    - MAF placement.
  - Throttle Position Sensor.
  - Coolant Temperature Sensor.
  - Air Charge Temperature Sensor.
  - MAP Sensor.
  - Oxygen Sensor:
    - Factory O2 sensor vs. Wideband O2 sensor.
- Air/Fuel Ratio:
  - What does it mean.
- Closed Loop vs. Open Loop.
- Short Term Fuel Trims vs. Long Term Fuel Trims.
- Fuel Injectors:
  - Injector Tables.
  - Common Injector Color/Sizes.

- Fuel Tables:
  - Base Fuel Table.
  - Base Fuel Table Cold.
  - Commanded A/F.
- Best WOT A/F Ratios.
- MAF Transfer Function.
- Spark Tables:
  - Borderline Knock Table.
  - Re-Normalizing Tables.
- Idle Tables:
  - Idle Speed Drive/Neutral.
- Axle and Tire Sixe Tables.
- Adaptive Learning.
- Misc. Scalar.
- Rev and Speed Limiters.
- Rear O2 Scalar.
- System Switches.
- Tuner Checklist:
  - Gather Info.
- Starting a Tune File.

Prerequisites
- Become an SCT Dealer.
- Become a Pro Racer Package user.

Duration
- 3-4 hours

Cost
- $250.00