DIAG4 BIKE ®   ATAL

Professional diagnostics & tuning tool for workshops and tuning centers

Engine tuning HARLEY-DAVIDSON®

TUNING STRATEGY

- The tuning system focuses on Harley-Davidson engines equipped with DELPHI EFI (diagnostic communication J1850 or CAN)
- The tuning system is based on diagnostic system **DIAG4BIKE**. **DIAG4BIKE** is the professional diagnostic tool for Harley-Davidson Motorcycles. The tuning software **DIAG4TUNE** is included in the diagnostic software from DIAG4BIKE. To tune an individual motorcycle a MULTI-DONGLE (hardware key) and tuning licence is needed.
  It is recommended to use last version of **DIAG4BIKE** software for diagnostic or tuning.
- The tuning process does not require the installation of additional component(s) or any motorcycle harness modification. Tuning is based on the modification of EFI Calibrations (software modification) exclusively via the diagnostic connector.
- The first step in Tuning is storage of the original EFI Calibration. The tuning operator can restore the original EFI Calibration at any time during tuning process (stock calibration).
- The tuning process is used to optimize Fuel Maps in case of any changes to the configuration of engine components or accessories (exhaust or/and intake system etc.)

AVAILABLE TUNING METHODS

1. ADVANCED TUNING

By this method of the tuning is possible to use full range of **DIAG4TUNE** functions. The method provides ability to use an embedded database of calibrations. These calibrations (maps) are pre-set for several configurations of exhaust and intake components (open exhaust, intake and combinations). Advanced tuning method provides important improvement of engine functions. The best engine efficiency is possible to rich only by using PROFESSIONAL TUNING method.

Necessary Tuning Components:

DIAG4BIKE   **MULTI DONGLE**

Reference
CCE: 853 745(6)
ZODIAC: 732 050(1)
ATAL: AT532 5006(7)

+

Reference
CCE: 653 747
ZODIAC: 732 056
ATAL: AT531 5049

Reference
CCE: 921 209
ZODIAC: 735 448
ATAL: AT531 4094.B

![ATAL logo] ![DIAG4 BIKE logo]

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2. PROFESSIONAL TUNING - engine fuel maps optimization

By this method of the tuning is possible to use full range of **DIAG4TUNE** functions. The key function is here VOLUMETRIC EFFICIENCY MAP MEASUREMENT under load. It means real VE maps measurement of each engine configuration. VE map measurement can be done on an appropriate Roller Station, good example is SMART POWER BENCH, or during Road Test on the street. Professional tuning method provides the best bike tuning for each special engine - maximal efficiency, torque and power.

Necessary Tuning Components:

AFR TUNING MONITOR

DIAG4BIKE

MULTI DONGLE

Reference
CCE: 619 084
ZODIAC: 732 044
ATAL: AT106 4016

Useful Tuning Components:

INSTALLATION SET LAMBDA

INSTALLATION SET LAMBDA MINI

Reference:
ATAL: AT106 4020

Reference:
ATAL: AT106 4064

SMART POWER BENCH with aluminium ramp

Reference
ATAL: AT531 4098

Blank ECM Flash

DIAG4BIKE

MULTI DONGLE

Reference
CCE: 921 209
ZODIAC: 735 448
ATAL: AT531 4094.B

This function is used to flash a new blank ECM. By this function you can set a VIN number and after flash the selected calibration according to the VIN number. It can be also done for the used ECM. If this function is successful you can do full range of the DIAG4TUNE functions.