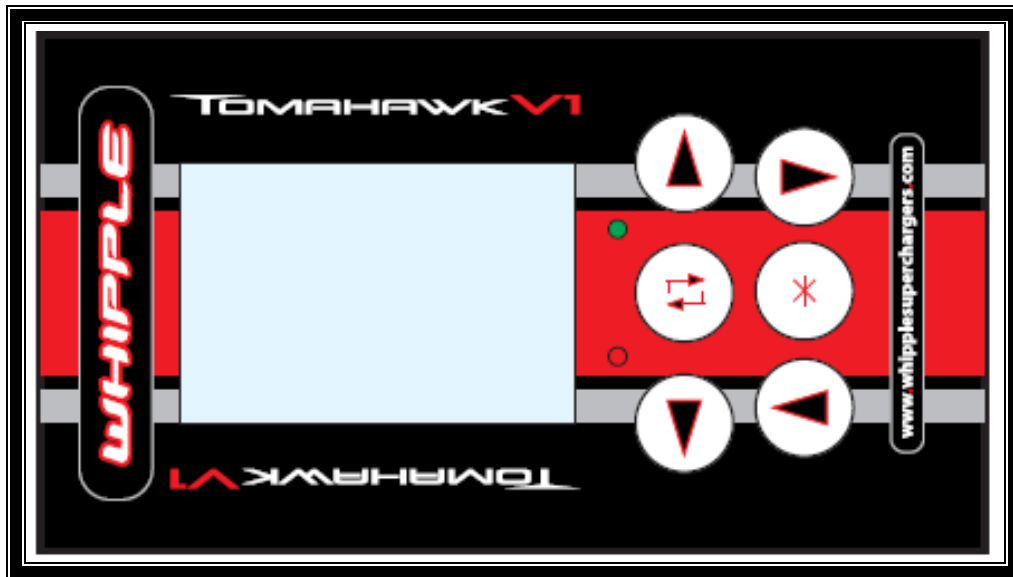# WHIPPLE TOMAHAWK INSTRUCTION MANUAL

2015 AND UP FORD F150 5.0L
2015 AND UP FORD MUSTANG/GT350
2017 AND UP FORD ECOBOOST 2.7L/3.5L

INTERNET ACCESS REQUIRED
SD MEMORY CARD READER REQUIRED

The Whipple calibration procedure is based off factory calibration files. If you have an aftermarket calibration, put the calibration back to STOCK. The TOMAHAWK will not upload and backup your file.

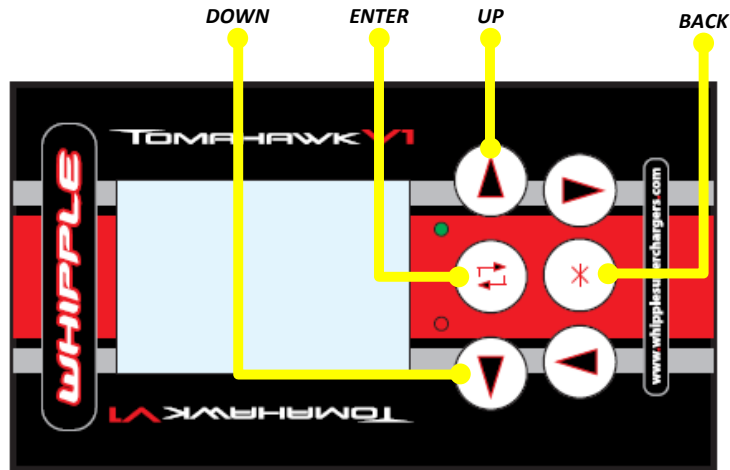**WHIPPLE SUPERCHARGERS**
3292 NORTH WEBER AVE
FRESNO, CA 93722
TEL 559.442.1261
FAX 559.442.4153
www.whipplesuperchargers.com
A color PDF of this manual is available, email
tech@whipplesuperchargers.com for a copy
tuning@whipplesuperchargers.com for calibrations

PREMIUM FUEL ONLY (91 OCTANE OR BETTER ALWAYS) RON+MON/2

DOWN   ENTER   UP   BACK

1. Connect the serial to OBD2 cable to the Tomahawk tool.

2. Connect the Tomahawk tool to the factory OBD2 port and turn the ignition to the **ON/RUN** position, engine not running (with foot OFF brake if push button).

3. Using the toggle buttons, select **Request Cal File**. Hit enter button. The tool will auto ping the factory PCM and create a **TOMAHAWK.REQ** file to the supplied SD card.

4. Remove the SD card from the Tomahawk tool by pressing it in until it springs out. Install the SD card in a memory card reader on your PC/Laptop and locate the REQ file.

5. Email tuning@whipplesuperchargers.com the **TOMAHAWK.REQ** file, along with the following information or go to the www.whipplesuperchargers.com and click the calibration request link (Whipple Superchargers Calibration Request). Note: Typical response time is up to 24 hours from request time during normal business hours.
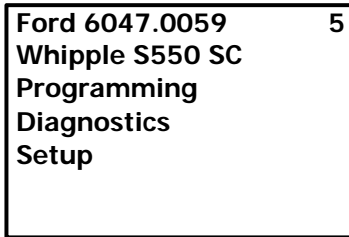
VEHICLE TYPE	ENGINE SIZE	MODEL YEAR

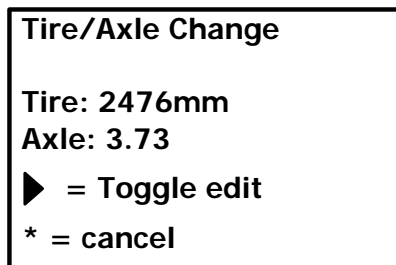**SUPERCHARGED APPLICATIONS ADDITONAL DATA REQUIRED**

STAGE 1 OR 2	THROTTLE BODY (STOCK, 132, 150)

6. Whipple Superchargers will email your calibration file which will have a unique file name ending with **.BIN** and firmware file named **APP.LDR**. Save these files for future access. Drag/drop or save these files to the supplied SD card using a laptop/PC. ***Only 1 BIN and LDR file can be stored at a time. Never change the file names, this will cause a conflict with the tool. If you have downloaded more than once, windows will add a (1) or (2) at the end of the file name. Always delete this. **NOTE: Keep your TOMAHAWK.REQ file on the tool for later use if needed for future updates.**

7. Connect the Tomahawk tool to the factory OBD2 port and click the push button one time (with foot OFF brake) or turn the key to the **run/accessory position**. The new firmware will install automatically when the tool is powered on.

8. With the ignition key set to the ON/RUN position, use the arrow options to select "**Programming**" tab and click the enter button. Follow the onscreen menu for flashing the vehicle. Once you're done flashing, cycle the key off for 5 seconds, then back on.

```
Ford 6047.0059        5
Whipple S550 SC
Programming
Diagnostics
Setup
```

9. Once you're done flashing, cycle the key off for 5 seconds, then back on. Select the "**Diagnostic**" tab, read all the DTC (trouble codes). Erase all codes. Note: De-energizing relay code is common after flashing and will go off after a few driving cycles or if you hit clear DTC 5-6 times. The vehicle will run proper even if this code is on.

10. After flashing the PCM, in some rare cases, a crank/profile relearn is required. This only needs to be performed **IF** you get a random misfire code or hard starting issues, or, you have changed the clutch on a manual transmission. To perform a profile relearn, start the engine, leave the vehicle in **PARK**. Select the "**Diagnostics**" option. Scroll to the Profile Relearn and click enter. Follow the onscreen instructions. Note that the engine must be at normal operating temp (160deg F+) to perform this test and you must blip the throttle to get RPM over 4500rpm for the process to work. If you begin the test, but leave it unfinished, it will set a crank learn DTC as it erases the original data. Therefore, to run properly, this procedure needs to be finished to remove this DTC.

11. After flashing PCM, if the axle ratio and/or tire size is not stock. Turn the ignition key to the "**ON**" position (no foot on brake). Click the "**Diagnostic**" tab. Scroll to the **Tire/Axle Change** and hit **Enter**. Using the on-screen instructions and arrow keys, change the axle ratio to desired ratio (ex. 3.55, 3.73, etc). For tire size changes, tire size is the tire circumference in millimeters. Measure the rollout of the tire, to convert from inches to MM, multiply by 25.4. Example (97.48" x 25.4 = 2476mm). Another, less exact method, measure the height of the tire, multiply by 3.14 to get the circumference. Hit enter when done and follow the on-screen menu to complete the tire/axle changes. You may do the tire and axle at the same time, or just one.

```
Tire/Axle Change

Tire: 2476mm
Axle: 3.73

▶  = Toggle edit

*  = cancel
```

Tomahawk Error Codes	
Code #	Description
2200	Multiple BIN files found on SD Card
2201	Flash file on SD card exceeds max name length
3560	Max number of downloads reached
3610	VIN read error
3670	Enter falsh mode error
3673	SBL download error
4681	Tire/axle size out of range

DATA LOGGING WITH TOMAHAWK TOOL

1. Connect the OBDII connector to vehicles OBDII connector. Turn the ignition to the ON position with engine not running. Allow the Tomahawk tool to power up. The Tomahawk will start with a Whipple splash screen, hit the enter button to continue. Toggle to **DIAGNOSTICS** and click the enter button.

> **Ford 6047.0059   5**
> **Whipple S550 SC**
> **Programming**
> **Diagnostics**
> **Setup**

2. Select **DIAGNOSTIC MENU DATA DISPLAY**.

> **Diagnostic Menu**
> **Data Display**
> **Diagnostic Codes**
> **Show Module Info**
> **Profile Relearn**
> **Tire/Axle Change**
> **Octane Adjust**
> **Other Modules**

3. Whipple has provided pre-made PID list for logging. Unless instructed otherwise, always use **WhippleData** list for logging.

> **Standard Data**
> **WhippleData**
> **DeepDiveFuel**
> **DeepDiveTFC**
> **DeepDivePump**
> **DeepDiveKnock**
> **DeepDiveTorque**

   a. Standard Data: Generic SAE Pids.
   b. WhippleData: Enhanced Pids.
   c. DeepDive logs are proprietary logs that are encrypted and cannot be viewed by customer. These are only to be used when having specific problems, Whipple Tech may instruct you to log using one of these special list.

4. Toggle to the **CAPTURE = ENABLED** option to record data. The **CAPTURE = DISABLED** is for live viewing only, as this will not save the data.

> **Capture = enabled**
> **Capture = disabled**

5. Start the vehicle. Click the enter button to start the logging. If given specific instructions on what to test, follow these. If not, give a 2-4 minute general drive that has idle and part throttle driving. Once done, hit the asterisk once to stop the data log and the second time to save the data log. Remove the SD card and install in PC. The **CSV** or **ENC** file are the logs. Send this to tuning@whipplesuperchargers.com or to support@whipplesuperchargers.com.