



Twin Tec

TCFI Gen 7 Rev 1.80 Firmware Update Tech Note

CAUTION: CAREFULLY READ INSTRUCTIONS BEFORE PROCEEDING. NOT LEGAL FOR SALE OR USE IN CALIFORNIA OR ON ANY POLLUTION CONTROLLED VEHICLES.

FIRMWARE REVISION HISTORY

- Rev 1.80 firmware provides support for TwinCooled™ Equipped Touring bikes, requires TCFI Log 18.1 and PC_Link 18.1.
- Rev 1.70 provides support for the ETC test mode in TCFI Log version 18.
- Rev 1.60 fixes a bug that causes P2100 ETC driver open circuit diagnostic code and limp back condition upon repeated rapid throttle movements.
- Rev 1.50 provides VIN support for international applications and revised limits for ETC auto-calibration.

MAIN PROCESSOR FIRMWARE UPDATE PROCEDURE

1. Use PC Link TCFI and download your current setup data from the TCFI unit.
2. Save your setup data to disk. **All data in the TCFI is lost during update.**
3. Update the TCFI main processor firmware using Mega Boot Programmer software and the TCFI Gen 7 Rev 1.80 main processor firmware files appropriate for your version (refer to the Mega Boot Programmer instructions and the firmware readme file). You can download Mega Boot Programmer and the TCFI Gen 7 Rev 1.80 firmware from our website.
4. Use PC Link TCFI to upload your saved setup data to the TCFI unit. No edits are required to the setup file.
5. Reprogram the VIN and odometer mileage.
6. Reprogram any ETC parameters (if default values were modified).

AUXILIARY PROCESSOR FIRMWARE UPDATE PROCEDURE

Minimum Auxiliary Firmware is 1.70. It is not required to update to Aux Firmware 1.80, there were no changes made. If required, update the TCFI auxiliary processor firmware using Mega Boot Programmer

software and the TCFI Gen 7 Rev 1.80 auxiliary processor firmware file (refer to the Mega Boot Programmer instructions and the firmware readme file).

SUPPORT FOR TWINCOOLED™ ENGINES

2014+ engines that have factory liquid cooling systems can have full compatibility and adjustability with the use of version 1.80 firmware and PC Link 18.1 and TCFI Log 18.1. No hardware changes are necessary, however you must have TCFI7 firmware version 1.80 to utilize the coolant pump and cooling fans (see TCFI Gen 7 Rev 1.80 Firmware Update Tech Note).

The coolant pump will run when the engine is running, or when the conditions below exist:
Fans are turned on based on coolant temperature and vehicle speed. These are the stock settings:
Fan On Temp Below VSS : 105°C. This is the temperature setting that fans will turn from zero vehicle speed up to the programmed vehicle speed.
Fan On Temp Above VSS: 118°C. This is the temperature setting at which the fans will remain on above the programmed vehicle speed.
Speed for above Fan Settings 24 KPH. This is the vehicle speed breakpoint that the fan logic will follow to turn on the fans.
Fan Off Hysteresis: 8°, any scale. This is a temperature hysteresis value so the cooling system doesn't constantly turn itself on/off.

When the engine is switched off and the cooling system needs to continue running(ex: Turbo Timer), the following can be adjusted:
Engine Off Fan Timer: 180 seconds
Engine Off Cooldown Temp: 95°C

Finally, the coolant temperature, coolant pump operation, and fans operation are logged in version 18.1+ of the TCFI Log software.