

## MAP1251C Over Boost Clamping Device

### For Toyota Engines or any Other Engines Need to Clamp Over Boost Condition

For the engine causing **OVER BOOST ERROR** due to imbalance between MAF and MAP sensor. Mostly caused by excessive turbo pressure that cannot be reduced by turning the variable geometry vane disc by stepper motor or vacuum control in the turbocharger.

In Toyota 1KD-FTV engine car computer thinks over pressure of the turbocharger can damage the diesel engine which is very outdated idea. Many other 3.0L diesel engine runs up to 32 PSI. Toyota 1KD-FTV engine only allowing 14 PSI maximum. Therefore, any overpressure going over 14 PSI will put you into limp mode with P1251 error message. Transient overpressure does not put you into limp mode, but continuing more than few second and repeating over 4 times will trip the error message with limp mode.

**Causes:** MAP = Manifold Absolute Pressure (Turbo Pressure sensor). MAF = Mass Air Flow sensor (At Air Cleaner Box). Faulty stepper motor in turbocharger, Seized up vane disc in turbocharger, Faulty MAF or MAP sensor (Shifted out of range by aging), Faulty EGR valve (Stuck open or leaking), Air leak between MAF and MAP sensor (Leaking intake manifold), After market modification, the diesel chip devices that increase the MAP values to increase the fuel injection (More MAP pressure means more fuel), After market exhaust pipe (Better gas flow means higher turbo pressure which is higher MAP value), Faulty fuel injector (can cause imbalance of power by pulsing).

After you checked out and all is okay and no faulty parts? Only then try out our device which can be solved by clamping MAP sensor output using our MAP1251C device. The device is inserted where the MAP sensor is and takes 1 minute to install. The MAP1251C has a potentiometer for adjustment to stop MAP sensor output climbing, which causes the over boost error code. The device will not cause barometric sensor failure by having delay circuit.

The device will NOT reduce the MAP output voltage in anyway, but only clamp or stop MAP output voltage rising at set point by potentiometer. It can be set between from 3.5v to 5v. Most of over boost error will trip around from 3.9 to 4.3v, but I found every engine was different so you need to experiment on your engine. You can start from 4.75v and bring potentiometer down a little by little towards 3.5v until you get no more error code.

The most of the over boost error problem was stopped by setting around 4.2v, but some extreme cases required going down to 3.75v without losing any power.

Please note: Try to set voltage as high as possible, Setting clamping voltage to too low may cut down some power, so please try out before you settle down. The device is extremely useful for after market exhaust pipe mods or turbo charger. It can be used to stop the over boost error code in **Nissan engines** when the EGR pipe is blocked fully.

**Installation:** The unit is completely waterproof (Silicon Potted). Please insert the unit between the MAP sensor and car computer. **Please fix the unit body with suitable cable ties so it won't rattle around and end up broken wires.**

If you worried about deep water fording, you can use silicon to seal the gap under the potentiometer knob only after completing the testing.

We have two types of this device, one is with specific engine MAP connectors so you can install easily by just plug in. Or a version with just flying wires for you to connect manually. Later one is cheaper due to not using auto connectors.

**Disclaimer Notice:** Ozbush Electronics is not responsible for any damages or costs caused by using this device. You must know what you are doing. The P1251 error code in Toyota engine can be caused by other unknown fault too. Please find the fault and correct the problems before you are relying on this device. Our device is a very simple and cannot cause any engine damage.

