

MicroTech

DO YOU HAVE ANY PROTECTION ?

A turbocharger is a precision piece of engineering, capable of spinning at speeds up to 100,000 r.p.m., and may reach temperatures as high as 750 C. Under these extreme conditions, a constant supply of fresh oil is essential to lubricate friction surfaces and aid in heat dissipation. When the engine is shut down the supply of oil is immediately cut off: if conditions are still too harsh, this can result in seized bearings, or warpage due to excessive heat.

The *MicroTech Turbo Timer* protects your turbocharger by keeping the engine running for a short period after the ignition has been switched off, giving the turbocharger time to "wind down" with a supply of fresh oil until conditions have normalised, thus preventing frustrating and expensive damage.

WHY CHOOSE A MicroTech TURBO TIMER ?

Simple one button operation
Easy to read display
Microprocessor controlled
10 idle-down time settings from 1/2 to 5 mins.
Small and self-contained
Sturdy aluminium case
Easy installation
Low cost
Designed and built in Australia
12v or 24v Applications

TURBO TIMER INSTALLATION

1. Find a suitable mounting location for the *Turbo Timer*.
2. Mark the mounting screw locations and drill the mounting holes with a 1/8" drill bit. Fix the *Turbo Timer* in place using two short self-tapping screws.
Alternatively, if you do not wish to drill holes in the trim, mount the *Turbo Timer* in position using a good quality double sided tape.
3. At the back of the vehicle key switch, identify the + 12v permanent power wire (has + 12v AT ALL TIMES), and the + 12v ignition power wire (has + 12v when key is switched to "IGNITION ON" position).
4. To prevent injury or damage, disconnect the negative (-) terminal of the vehicle battery before continuing installation.
5. Connect the BLACK wire to a good earth point on the vehicle chassis.
6. Connect the RED wire to the + 12v permanent power wire.
7. Connect the ORANGE wire to the + 12v ignition power wire.
8. Reconnect the negative battery terminal.

TURBO TIMER OPERATION

The *MicroTech Turbo Timer* is microprocessor based, allowing all inputs to be performed using only the one button. The 4 position LED display allows the user to quickly identify the current mode of the timer, as well as the set idle-down period.

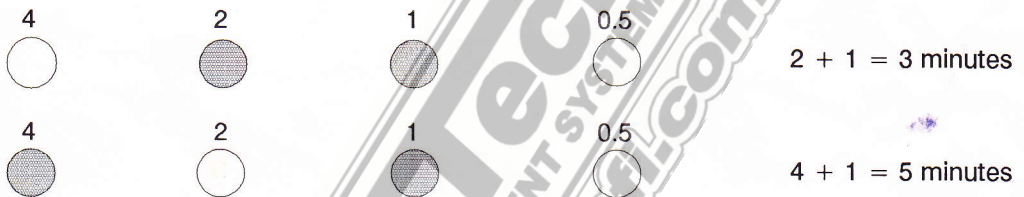
The *Turbo Timer* has 3 basic modes of operation; OFF, SET, and ON.

1. OFF Mode; the 4 LED's "chase" back and forward across the display.

In the OFF mode, the *Turbo Timer* will NOT switch on when the ignition is turned off. This is useful when working on the engine, as the *Turbo Timer* will not have to be switched off every time the engine is shut down.

2. SET Mode; the 4 LED's indicate the set idle-down period.

The 4 LED display on the *Turbo Timer* is used to indicate the set idle-down period. From the left, the LED's indicate a period of 4 mins, 2 mins, 1 min, and 30 seconds respectively; to read the duration of the idle-down period, add the value of the lighted LED's, eg:



The *Turbo Timer* can be set for one of 10 different idle-down periods ranging from 30 seconds to 5 minutes. Each time the button is pressed, the idle-down period is increased by 30 seconds; pressing the button again after reaching the maximum period of five minutes will return the *Turbo Timer* to OFF mode

The *Turbo Timer* memorises the setting, and will return to that setting each time it is switched on. To switch the *Turbo Timer* off, keep pressing the button until OFF mode has been reached (the 4 LED's "chase" back and forward across the display).

3. ON Mode; the LED's flash the remaining idle-down time.

When the vehicle ignition is switched off, the *Turbo Timer* takes over and runs the motor for the duration which has been set, and will then shut the engine down. During idle-down, the LED display of the *Turbo Timer* will flash the remaining idle-down time. (see diagram above for information on how to read the time display).

In the ON mode, the button acts as a "kill switch"; in case of emergency, just press the button and the engine will be immediately shut down.

TURBO TIMER SAFETY TIPS

- * Ensure that thermatic fans operate during idle-down.
- * Ensure that the vehicles handbrake works properly.
- * Vehicles with MANUAL transmissions should be left in NEUTRAL, handbrake on.
- * Vehicles with AUTOMATIC transmissions should be left in PARK, handbrake on.
- * Never idle-down in an enclosed area; keep garage doors open to avoid a build-up of dangerous gases.