

Engine Off Timer Monitor

The engine off time is obtained from the powertrain control module (PCM) or the body control module (BCM). If the engine off time is obtained from the BCM, the PCM expects to receive a message with the engine off time from the BCM shortly after engine start up. If the message is not available on the controller area network (CAN) or a battery disconnect has occurred, a communication DTC sets.

There are two parts to this test.

The first part determines if the timer is incrementing during engine OFF. The PCM determines the timer is incrementing during engine OFF by comparing the engine coolant temperature value prior to shut down, to the engine coolant temperature value at ignition ON to determine if an engine OFF soak has occurred. For an engine OFF soak to occur, the engine coolant temperature value must be greater than 71°C (160 °F) while the engine is running. The timer starts at ignition OFF and the engine coolant temperature value must decrease by greater than 17°C (30 °F) before the next ignition ON signal. If the engine off timer indicates a value less than 30 seconds, a DTC sets.

The second part checks the accuracy of the engine off timer. The PCM determines the accuracy of the engine off timer by comparing time in the BCM with the time in the PCM. The timer in the BCM is allowed to count up for 5 minutes and compared to a different clock in the PCM. If the two timers differ by more than 15 seconds, a DTC sets.
