

Idle Air Trim

Idle air trim is designed to adjust the idle air control calibration to correct for wear and aging of components. When the engine conditions meet the learning requirement, the strategy monitors the engine and determines the values required for ideal idle calibration. The idle air trim values are stored in a table for reference. This table is used by the PCM as a correction factor when controlling the idle speed. The table is stored in the KAM and retains the learned values even after the engine is shut OFF. A DTC is set if the idle air trim has reached its learning limits.

Whenever an idle air control component is replaced, or a repair affecting idle is carried out, it is recommended the KAM be reset. This is necessary so the idle strategy does not use the previously learned idle air trim values.

To reset the KAM, refer to Section 2, Resetting The Keep Alive Memory (KAM). It is important to note that erasing DTCs with a scan tool does not reset the idle air trim table.

Once the KAM has been reset, the engine must idle for 15 minutes (actual time varies between strategies) to learn new idle air trim values. Idle quality improves as the strategy adapts. Adaptation occurs in 4 separate modes as shown in the following table.

Idle Air Trim Learning Modes

Transmission Range	Air Conditioning Mode
NEUTRAL	A/C ON
NEUTRAL	A/C OFF
DRIVE	A/C ON
DRIVE	A/C OFF

Resetting The Keep Alive Memory (KAM)

Description

Resetting the KAM returns the PCM memory to its default setting. Adaptive learning contents such as adaptive airflow, idle speed, refueling event, and fuel trim are included. Clearing the continuous diagnostic trouble codes (DTCs) and resetting the emission monitors information in the PCM, is part of a KAM reset. Refer to Clear The Continuous Diagnostic Trouble Codes (DTCs) And Reset The Emission Monitors Information In The Powertrain Control Module (PCM) in this section. Both can be useful in post-repair testing.

After the KAM has been reset, the vehicle may exhibit certain driveability concerns. It is necessary to allow the engine to idle at normal operating temperature with the A/C off for 2 minutes. Then drive the vehicle to allow the PCM to learn the values for optimum driveability and performance.

This function may not be supported by all scan tools. Refer to the scan tool manufacturer's instruction manual