M1436: 2017-Later Engine Idle Temperature Management System (EITMS)

Purpose

The purpose of this bulletin is to inform dealers of the operational details of the Engine Idle Temperature Management System (EITMS) used on all 2017 Touring, Police, Trike and CVO Touring vehicles. Additionally this bulletin will bring awareness to a calibration change that was made to this same population of vehicles produced after early October, 2016.

Vehicles Affected

This information applies to all 2017 Touring models, Police models, Trike models and CVO Touring models.

Markets Affected

All markets are affected.

Required Dealer Action

Review this bulletin, and when necessary, inform customers that they can enable or disable EITMS to complement their riding style. Explain:

- When EITMS is useful.
- How EITMS operates.
- How to enable / disable EITMS.
- Production changes made to the EITMS calibration.
- How to address questions and concerns with EITMS.

EITMS Use

For customers who find themselves at prolonged idle or in stop and go traffic, EITMS provides limited cooling of the rear cylinder. When certain conditions occur, EITMS turns off the rear cylinder fuel injector. The rear cylinder then becomes an air pump which cools the rear cylinder.

NOTE

When EITMS mode is active, the rider may notice a difference in idle cadence as well as a difference in sound. Additionally there may be a unique exhaust odor. These are all considered to be normal conditions.

Operation
If EITMS is active, releasing the clutch lever to the clutch engagement zone will deactivate EITMS and begin firing the rear cylinder. If preferred, while the vehicle is stopped, customers may benefit from twisting the throttle/raising engine speed slightly just before riding away, which will deactivate EITMS and begin firing the rear cylinder immediately regardless of clutch lever position.

The 2017 Milwaukee Eight engine warm idle speed is 850 RPM, but the idle speed can vary depending on other factors including electrical load on the vehicle. When EITMS is active on this engine, the idle speed will increase to 950-1000 RPM until EITMS is deactivated.

Inform customers that they can enable or disable EITMS to complement their riding style.

**Activation**

**NOTE**
On 2017 model year vehicles, EITMS will not operate within the first 30 seconds after starting the engine.

EITMS will turn off the rear cylinder fuel injector **when all of these preset parameters are met:**

- Throttle position is at idle
- Motorcycle speed is under 1.2 mph (2 km/h)
- Engine speed is under 1200 RPM
- Engine Temperature (ET) sensor input reading is above preset level
- Ambient Air Temperature (AAT) sensor reading is above preset level (radio equipped models only)

**Deactivation**

EITMS will deactivate and the rear cylinder fuel injector will resume operation **if any one of the following conditions occur:**

- Ambient Air Temperature (AAT) sensor reading drops below preset levels (radio equipped models only)
- Engine Temperature (ET) sensor reading drops below preset level
- Throttle position is above idle (rider rolls throttle)
- Motorcycle speed exceeds 1.9 mph (3 km/h)
- Engine speed exceeds 1350 RPM
- The clutch is released with the motorcycle in gear

**Enable / Disable EITMS**

When enabled, EITMS will automatically activate when the above parameters mentioned are met. When disabled, EITMS does not activate under any conditions.

**To Enable / Disable EITMS:**

**NOTE**

- EITMS can be enabled or disabled with the engine running or shut off.
- On vehicles equipped with radios, the EITMS activation and enabled/disabled can be viewed in the Information Screen.
1. Turn the ignition ON and the OFF/RUN switch to RUN.
2. Roll-off the throttle grip until it stops turning and hold.
3. After 3 seconds, the cruise control indicator lamp will flash indicating the EITMS status.
   1. Flashing green indicates EITMS is enabled.
   2. Flashing amber indicates that EITMS is disabled.
4. To set the indicated status, release the throttle control grip.
5. To change the status, repeat above steps.

**PRODUCTION CALIBRATION CHANGES**

All 2017 Touring, CVO Touring and Trike vehicles built after approximately 10/1/2016 received an updated calibration to address an idle “sag” concern. Under certain slow speed/no throttle input conditions, depending on clutch lever switch input, the idle speed could dip slightly. The updated calibration helps to reduce this dip in idle speed under those conditions. Additionally, the engine temperature requirement to enable EITMS was increased on Twin-Cooled models. This change effectively increases the time to enable EITMS after a cold start.

Additionally, 2017 model year vehicles produced before this change were shipped to dealers with EITMS enabled. Vehicles are now being shipped with EITMS disabled.

As a vehicle is prepared for retail delivery, review the operation of EITMS with the customer, and keep in mind that the EITMS setting (enabled/disabled) should be checked and set according to the customer’s preferences.

If a customer is concerned with the slow speed idle performance of a vehicle produced with the early calibration, the latest calibration can be installed at customer/dealer expense.