



## **ATC comments on the draft of CEC technical interpretation note for use of the WWFC**

**Document 158**

**May 2024**

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# ATC Fuel Additive Group

## ATC comments on the draft of CEC technical interpretation note for use of the WWFC

### CEC-F-005 – M102E

#### Technical Comments

*FAG would suggest to add the following sentences:*

~~No comments.~~

As per the F-005 Chairman's letter of January 2023: "The test remains in TDG with no plan to restore to SG status. Therefore, as a result, any M102E test run since October 2021 is not / will not be a valid CEC test."

### CEC-F-020 – M111 IVD

#### Technical Comments

*FAG would suggest to replace and remove the last two paragraphs on limits versus M102, as in reality it will be almost impossible to correlate back to M102E:*

The method also has the potential to measure IVD. ~~If required, the CEC could potentially undertake a project to establish an M111 value equivalent to the 30 mg/valve limit in the M102E.~~

~~The M111 engine has four valves per cylinder rather than the two valves found in the M102E, further, the M111 valves are smaller and hence the valve tulip surface area is smaller, therefore, the limit of 30mg per valve would need to be adapted for the M111.~~

This method has been available for an extended period and is more representative of modern gasoline, port-injection engines than F-005. The industry has gained significant experience in that time. Based on the precision and response to different fuel qualities, it is a valuable test and can be the main IVD tool for the industry.

This test is a suitable alternative to F-005 test method.

#### Test Comments

*FAG would suggest to add the following sentence:*

The CEC guidelines require any company generating CEC quality results to be part of the test method surveillance group and to be accredited.

### CEC-F-023 – XUD9

#### Test Summary

*FAG would suggest to add the following sentences:*

Despite being an older design, this engine still has some value to emerging markets. The test has high value due to using fuel only (without pro-accelerants) and its precision and response to additives is good.

## Test Comments

*FAG would suggest to add the following sentence:*

The CEC guidelines require any company generating CEC quality results to be part of the test method surveillance group and to be accredited.

## CEC-F-098 – DW10B

### Test Summary

*FAG would suggest to amend the following in those sentences:*

The DW10 Nozzle Fouling test measures the propensity of fuels to provoke fuel injector fouling in modern engines and shows the ability of ~~detergent~~ fuel additives to prevent or control these deposits. The target is to be able to discriminate between a fuel that produces no measurable deposits and one which produces deposits that cause **more than** 2% loss in power which is considered unacceptable by engine manufacturers.

New injectors go through a run-in period of sixteen cycles on the ~~non-fouling DF79~~ CEC RF-79-07 fuel and are then used for multiple candidate tests.

*FAG would suggest to add the following sentences:*

The test uses a PSA 2L high pressure common rail design engine.

The test is conducted using zinc containing fuels. The base fuel is doped with Zinc neodecanoate to simulate poorly designed / maintained fuel storage and supply systems.

## Test Comments

*FAG would suggest to add the following sentence:*

The CEC guidelines require any company generating CEC quality results to be part of the test method surveillance group and to be accredited.

## CEC-F-110 – DW10C

### Test Summary

*FAG would suggest to amend the following sentence:*

The main aim of the test is to discriminate between fuels that differ in their propensity to provoke ~~IDID~~ **internal diesel injector deposits (IDID)** in direct injection common rail Diesel engines.

*FAG would suggest to add the following sentences:*

The uses a PSA 2L high pressure common rail design engine meeting Euro 5.

The base fuel is doped with dodecanyl succinic (DDS) acid and sodium naphthenate to form sodium carboxylate deposits.

The test is a useful tool for assessing the risk of internal diesel injector deposits (IDID) from different market fuels.

## Test Comments

*FAG would suggest to amend the following sentence:*

The CEC guidelines require any company generating CEC quality results to be part of the test method surveillance group **and to be accredited**.

## **CEC-F-113 – VW DISI**

### **Test Summary**

*FAG would suggest to add the following sentences:*

The VW EA 111 test measures the propensity of fuels to provoke fuel injector fouling in modern engines and shows the ability of fuel additives to prevent or control these deposits. The aim of the test is to discriminate between fuels that differ in their ability to prevent the production of injector deposits in direct injection spark-ignition (DISI) engines.

### **Technical Comments**

*FAG would suggest to add the following sentence:*

The test is relatively quick and cost effective and responds predictably to differing fuel qualities.