

## Direct comparison to Cetane Engine (ASTM D613)

- IP 617; EN 17155; ASTM D8183 (AFIDA) contains a statement reporting no bias to ASTM D613
- Calibrated to the original cetane number scale
- Multi point calibration using 7 blends of PRF (Primary Reference Fuels)

## Conformity to EN590

- Section 5.7.4 is key - approves alternative technologies
- IP 617; EN 17155; ASTM D8183 fully meet EN ISO 4259 requirements
- IP 617; EN 17155; ASTM D8183 are approved alternative test methods

## Significant difference with other CVCC instruments

- These use older CVCC technology reporting DCN, Derived Cetane Number
- DCN requires a correlation formulae to arrive at test result
- These DCN instruments require considerable 'tuning'

## Key strengths of AFIDA

- Minimises technician time
- Reports Indicated Cetane Number (ICN) - not DCN
- Calibrated using PRF's
- Fixed test temperature - no 'tuning' is needed
- Direct reading - no 'derived' formula applied
- Very small sample volume - just 40ml
- Fully automated with 36 place sample carousel



## Technology comparisons

	AFIDA ASTM D8183	ASTM D6890	ASTM D7170	ASTM D7668	D613 Engine
Test method	ASTM D8183 IP 617 EN 17155	ASTM D6890 EN 15195 IP 498	ASTM 7170 EN 16144 IP 567	ASTM D7668 EN 16715 IP 615	ASTM D613 IP 41
Result	ICN	DCN	DCN	DCN	CN
Calibration	7 PRF blends Auto using the Cetane scale	Heptane & MCH Manual	Heptane & MCH Manual	1 PRF & MCH Manual/Auto	PRF
Specialist gas/water	Not required	Yes	Yes	Yes	Yes
Temperature tuning	Not required	By operator	By operator	Automatic	n/a

## User operational comparisons

	AFIDA ASTM D8183	ASTM D6890	ASTM D7170	ASTM D7668	D613 Engine
Cost of instrument	Low	High	Low	Low	Very high
Operating complexity	Low	High	High	Medium	Very high
Test duration	25 mins	20+ mins	20+ mins	20-30 mins	45+ mins
Sample handling	Automatic 36 place carousel	Manual introduction	Manual introduction	Manual introduction	Manual introduction

## AFIDA - the future of cetane testing

- Cost effective investment - typically 1 year ROI
- Approved alternative to D613
- No bias to D613
- Uses the same PRF's as D613
- Minimum operational skill and minimises technician time
- Automated testing
- Just 40ml of sample per test
- Minimal maintenance

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