Prepared for

RNTBCI

RNTBCI : BR10_MT OBD CALIBRATION

STATUS REPORT – W1915

Pune, 10th April 2019
Gasoline Powertrains

FEV

Contents

- BR10_MT – Fault simulation 1st cycle (Mode 2)

- BR10_MT – Fault simulation 1st cycle (Mode 6)

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- BR10_MT – Fault Healing 3rd cycle (Mode 3, Mode7, Mode A)

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- BR10_MT – Mode 9 (CAL ID INFO))

OBD Calibration – Status W1914
BR10_MT – Fault simulation 1st cycle (Mode 2)

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Protocol: ISO 15765-4 (CAN)

List of supported Modes and PIDs
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Mode	PID	Modules	Comment
Mode 2	Frame 0	*****	Current freeze frame data
2	82	E8	Total run time with EI-AECD #6 Timer 1 active, Total run time with EI-AECD #6 Timer 2 active, Total run time with EI-AECD #7 Timer 1 active, Total run time with EI-AECD #7 Timer 2 active, Total run time with EI-AECD #8 Timer 1 active, Total run time with EI-AECD #8 Timer 2 active, Total run time with EI-AECD #9 Timer 1 active, Total run time with EI-AECD #9 Timer 2 active, Total run time with EI-AECD #10 Timer 1 active, Total run time with EI-AECD #10 Timer 2 active

Issue Statement

- During static measurement with generic scan tool, in mode-2 PID 82 refers total run time with EI-AECD which is the US legislation requirement and not covered in BS 6 legislations

- This PID 82 is a DIESEL SPECIFIC PID!! NOT TO BE USED FOR Gasoline!

- SAE J1979 Compliance is overlooked in case continual use!

```
Scan-Tool Mode 6 - Monitoring test results for specific monitored systems
----------------------------------------------------------------------

E8  ECM-EngineControl

Monitor ID  Test ID   Unit ID   Test value  Min value  Max value  Unit     Comment

01          0A        10        0.000       0.000      0.000      s        Exhaust Gas Sensor Monitor Bank 1 - Sensor 1
01          81        03        0.00        0.00       0.00                Exhaust Gas Sensor Monitor Bank 1 - Sensor 1
21          0A        24        0           0          0          counts   Catalyst Monitor Bank 1
A1          0C        01        0           0          0                   Misfire Monitor General Data
```

Issue Statement

■ Mode 6 observation indicates general misfire monitor data alone, whereas for BS IV legislation it's required to monitor individual cylinder misfire with 200 rev & 1000 rev!

■ For BS-VI , FEV Would recommend and calibrate the following additional items;

– Induvial Cylinder wise Misfire data per 200 Revolution

– Induvial Cylinder wise Misfire data per 200 Revolution

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BR10_MT – Fault simulation 1ˢᵗ cycle (Mode 3, Mode7, Mode A)

```
Scan-Tool Mode 3 - Emission-related diagnostic trouble codes
--------------------------------------------------------------

E8  ECM-EngineControl

MIL on
1 fault code entries

P0118    Engine Coolant Temperature Sensor 1 Circuit High
```

```
Scan-Tool Mode 7 - Emission-related diagnostic trouble codes detected during current or last completed driving cycle
--------------------------------------------------------------

E8  ECM-EngineControl

P0118  Engine Coolant Temperature Sensor 1 Circuit High
```

```
Scan-Tool Mode A - Emission-related diagnostic trouble codes with permanent status
--------------------------------------------------------------

E8  ECM-EngineControl

P0118    Engine Coolant Temperature Sensor 1 Circuit High
```

Issue statement

- Fault code is registered in Mode 3 and Mode A
- MIL ON in the 3ʳᵈ drive cycle : emission cycle

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```
Scan-Tool Mode 3 - Emission-related diagnostic trouble codes
------------------------------------------------------------

E8   ECM-EngineControl
MIL off
1 fault code entries

P0118    Engine Coolant Temperature Sensor 1 Circuit High
```

```
Scan-Tool Mode 7 - Emission-related diagnostic trouble codes detected during current or last completed driving cycle
----------------------------------------------------------------------------------------------------------------

E8  ECM-EngineControl

No fault code entry
```

```
Scan-Tool Mode A - Emission-related diagnostic trouble codes with permanent status
----------------------------------------------------------------------------------

E8   ECM-EngineControl

P0118    Engine Coolant Temperature Sensor 1 Circuit High
```

Issue statement

- MIL OFF in the healing cycle.
- Fault code registry is observed in Mode 0A

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BR10_MT – Error log status(fault simulation and healing)

Fault status	Description	Pcode	MIL	WAL	Mode 7	Mode 3	Mode A
Fault Simulation	Engine coolant temperature sensor 1 circuit high	P0118	ON	OFF	YES	YES	YES
Fault Healing	Engine coolant temperature sensor 1 circuit high	P0118	OFF	OFF	NO	YES	YES

- Fault simulation and Fault healing conducted on Dyno – Engine coolant temperature sensor
- MIL flashed ON the 1st cycle
- Error registry is observed in Mode A, Mode 3, Mode 7 during fault simulation 1st cycle
- During fault healing cycle the error registry observed in Mode A which is permanent DTC

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BR10_MT – Mode 9 (CAL ID INFO)

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Scan-Tool Mode 9 - Vehicle information
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E8   ECM-EngineControl

INFOTYPE 02        Vehicle Identification Number(VIN)
                   MEEBBA005K1637018

INFOTYPE 04        Calibration Identification (CALID)
                   HMLGT1157R
                   237103789S

INFOTYPE 06        Calibration Verification Numbers (CVN)
                   19 92 55 C2

INFOTYPE 0A        ECU Name
                   ECM-EngineControl

INFOTYPE 0F        Exhaust regulation or type approval number
                   HMLGT1157R
```

- Two CALID's are observed in Mode 9 with respect to individual CVN which is not BS 6 compliance

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