

QUESTIONS AND ANSWERS FOR CRC PROJECT E-135

“Tier 3 GDI Vehicle Technology Effects on Particle Emissions Operating with Different Fuels”

1. It is not entirely clear from the RFP about who is purchasing the vehicles. Can you please clarify? Is it CRC’s intention to discuss and finalize vehicle selection after the project is awarded?

A1. The vehicles for testing will need to be purchased by the contractor as part of this work, and de-greened based on the procedure highlighted in the RFP. The project will require two Tier 3 light duty gasoline direct injection vehicles with injection pressures equal or higher than 200 bar (e.g., 350 bar). These vehicles should be compliant with Tier 3 US standards. The expectation is that the contractor will propose vehicles that meet these requirements and the final vehicle selection will be determined by the project sponsor (CRC).

Please include a separate line item estimate in the quotation for the vehicle costs and possible overhead. Please include a list of suggested vehicles, and specify if they are new or in-use vehicles.

2. In section “Design of Experiment, Chassis Dynamometer Test Procedure, Item 10”
 - a. Does reference to a 4th test assume the Prep LA92 is counted as test number one so that T4 should be quoted at 25%?

Example : Prep1, T2, T3, T4 (at 25%)

A2. The correct sequence should be Prep1, T1, T2, T3, T4 (at 25%)

3. Should we expect weekly data review calls or only monthly?

A3. Please expect bi-weekly conference calls. Pressing issues or problems can be addressed as needed.

4. Can you provide target make/model for test vehicles or will this be determined in the future?

A4. Please refer to A1.

5. Should we include degreening mileage after the option for injector cleaning?

A5. This is an optional addition. When quoting this option, please describe the cleaning procedure you expect to use.

6. For PN, should we include SPN10 along with SPN23?

A6. Yes (but as optional)

7. Should we plan to measure N₂O raw or dilute? (FTIR or GC) We will already have the FTIR in place for NH₃.

A7. Raw data is suggested. FTIR of preference

8. Should we include statistical support as an option for DOE or analysis of results?

A8. Please use a standard approach to achieve a 90% to 95% confidence interval. Further discussion on design of experiments during kick-off. The goal is for a DOE upfront that results in minimum statistics at the end of the project.

9. Should we quote only Phase 1 PM/PN for the LA92 or all phases?

A9. Full cycle

10. The RFP does not provide any information regarding the facility requirements, other than that of the fuel storage facility. Can you provide any information regarding the requirements for the vehicle dynamometer emissions test facility?

A10. Facility should be 40 CFR 1065,1066 compliant

11. Can you please describe the sulfur purge procedure?

A11. Thank you for noting this. The sulfur purge procedure is attached to the end of this Q&A document.

12. Is it the intention of this project to reuse fuel from E-122-2 as a primary source of test fuel? Can CRC share the dates when these fuels were procured?

A12. The fuels were obtained in Summer 2020 and Winter 2021. CRC can send more specific dates if needed on contract.

13. Please clarify if CRC intends to supply the ethanol and T3 Cert fuel?

A13. These fuels will need to be obtained under the contract. The ethanol must be ASTM D4806 compliant.