

**Texas Commission on Environmental Quality
New Technology Research & Development (NTRD) Program
Monthly Project Status Report**

Contract Number: 582-11-13470-2019
Grantee: GE Transportation
Report for the Monthly period: April 1, 2012 – April 30, 2012 **Date Submitted:** May 10, 2012

Section I. Accomplishments

Provide a bulleted list of project accomplishments as well as a description of their importance to the project.

- Task 2.3.1.1: Specific fuel consumption and emissions duty cycle at the 1050 RPM was performed. A comparison baseline was established using the “not to exceed” boundary conditions and torque potential against GE turbo testing in the lab. This was to prepare the run conditions for the turbo matching to occur in May 2012. A similar baseline was established by looking at the fuel curve points and maximum overload potential points and how they compared to the GE turbo timing map developed for use in the lab.
- Task 2.6.2: The 8L250 prototype engine prototype build is underway and almost complete. Once the turbocharger arrives from the supplier, it will be mounted like the 6L250 prototype and prepared for shipment and test in Erie once the 6L250 testing is complete.

Indicate which part of the Grant Activities as defined in the grant agreement, the above accomplishments are related to:

- “Task 2.3.1.1 The performance testing will include varying the timing and operation of the engine to maximize the benefit of the Tier 3 emissions package.”
- “Task 2.6.2 The PERFORMING PARTY will develop and produce prototype assemblies to mount and operate a Tier 3 turbocharger on the existing L250 engine platform. This design work will include computer analysis and structural testing of the prototype mounting components.”

Section II: Problems/Solutions

Problem(s) Identified: Report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project

a) Although we have successfully run the engine and have “roughed” in the turbocharger performance, we have not been able to tune the turbochargers due to delays with the supplier’s engineering support. Our anticipated certification date for the (3) engine ratings is still August 2012 timeframe although there is a risk of this pushing out until end of September 2012. Although this is still within the window of the existing project completion status of 12/31/2012, this will affect the testing and certification of the final 8L250 test engine.

Proposed Solution(s): Report any possible solution(s) to the problem(s) that were considered/encountered

a) We are in the process of expediting the schedule of the support engineer in order to move forward with mapping. The delay in supplier support has been escalated to get the assistance needed in order to complete the test.

Action(s) Conducted and Results: Describe the action(s) taken to resolve the problem(s) and its effect

a) Currently, the only action is to actively monitor the testing process to see if we can condense the anticipated test time and to look for opportunities to reduce set-up times between testing.

Section III. Goals and Issues for Succeeding Period:

Provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen

- As with the last reporting period, the goal for the coming period is to complete the successful matching of the turbocharger package with assistance from the turbocharger supplier and to begin full scale functional testing on the 6L250. The building the 8L250 Prototype engine is almost complete at the packager.
- The design and analysis efforts of the production cast turbo shelf development are underway. Design is almost complete strict deadlines for review processes must be maintained to ensure the on-time delivery of the first prototype for testing on the 8L250 prototype engine.

Date: May 10, 2012

Authorized Project Representative's Signature

NOTE: *Please attach any additional information that you feel should be a part of your report or that may be required to meet the deliverable requirements for tasks completed during this reporting period.*