

## **NTRD Program Disclaimers**

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

Contract Number: \_\_\_\_\_ 582-5-65591-0009 \_\_\_\_\_

Grantee: \_\_\_ General Electric Transportation Rail , Erie, PA \_\_\_\_\_

Date Submitted: \_\_\_ 1/12/05 \_\_\_\_\_

Report for the **Monthly** period:

Starting Date \_\_\_ 10/15/04 \_\_\_                      Ending Date \_\_\_ 12/10/04 \_\_\_\_\_

Section I. Accomplishments *(Please provide a bulleted list of project accomplishments as well as a description of their importance to the project.)*

1. Project concept review meeting / conference call between GETS & SwRI on 11/18/04. Meeting attendees for SwRI Steve Fritz, John Hedrick, Gary Bourn, and Lee Dodge.
2. Determined that 645E & 645E3B (turbocharged version) engines have the same injector cam profile and injector plunger geometry, as shown in Figure #1.
3. Installed strain gauge rocker arms on 2 cylinders of a 16-645-E engine. Engine used in these tests is installed at SwRI Emissions Research Building 87. Completed 30-point test matrix to identify the start of injection at each operating condition.
4. Data analysis showed the SOI acted in an expected manner.
5. Determine injector plunger displacement vs. crank angle.

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

Southwest Research Institute contractual development and test activities

Section II: Problems/Solutions

<p>Problem(s) Identified</p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p>	NA
<p>Proposed Solution(s)</p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p>	NA
<p>Action(s) Conducted and Results</p> <p><i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i></p>	NA

**Section III. Goals and Issues for Succeeding Period:** *(Please 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)*

1. Order cams and injectors
2. Develop new injectors model including helix definition
3. Determine project scheduling software to use between GE and SwRI
4. Determine Design of Experiment approach for the lube oil consumption test for emissions reduction in power assembly configuration

*Ed Lu*

Date:

*1/12/05*

\_\_\_\_\_  
*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.*

Implementation Grants Section

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Texas Commission on Environmental Quality