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**New Technology Research & Development Program
Grant Contract 582-5-70807-0008**

Task 3 Deliverable

The preparation of this report is based on work funded in part
by the State of Texas through a Grant from the
Texas Commission on Environmental Quality.

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2/10/06

TASK DELIVERABLES

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
NEW TECHNOLOGY RESEARCH & DEVELOPMENT (NTRD)
PROGRAM

Task 3: Manufacture the DF2010 Fuel System (2.3.3)

SUBMITTED BY

CLEAN AIR WORLDWIDE GP, INC.

CONTRACT NUMBER 582-5-70807-008

**Texas Commission on Environmental Quality
New Technology Research & Development (NTRD) Program
Task Deliverables**

Contract Number: 582-5-70807-0008

Grantee: Clean Air Worldwide GP, Inc.

Date Submitted: February 8, 2006

Report for **Article 2. Task 3: Manufacture the DF2010 retrofit device**

Task Statement Number 2.3

Upon completion of Task 2, discussions were held with Brookside and B&A to manufacture the hardware and electronics for the DF2010 Fuel System to be installed in the DT466 engine.

Section I. Objectives

Task 2 and 3 are so related that task 2 for Brookside is contained in this report.

Sub-Task 2.2.1.2 and Sub-Task 2.3.1.1 regarding Brookside Machine
Mr. Henry Harness completed the design of all mounting brackets (2.2.1.2) and completed the design of The DF2010 retrofit device (2.3.1) and directed Brookside Machine to manufacture the following components:

- Turbo inlet adaptor: T4 to T3
- Sleeve for Turbo compressor inlet housing from 2.75 inches to 3.0 inches
- Four inch turbo discharge outlet adaptor
- One inch turbo drain fitting
- Induction tube for front side of turbo
- Auxiliary injector
- Fuel pump bracket
- Injector bracket
- Fuel pressure regulator bracket
- Induction tube mounting bracket
- New turbo discharge tubes
- Brackets for after cooler
- Power Generation Brackets with idle pulley provisions
- Idle pulley
- 18 tooth power generation drive sprocket
- 90 tooth drive sprocket
- power generator support bracket
- Injector cap for auxiliary injector with cooling fins
- Five inch fan spacer
- Exhaust manifold stud standoffs
- Evaporative module
- Modify inlet and outlet fuel pressure regulator
- Nickel plate evaporative module
- Nickel plate aluminum 18 tooth sprocket to give high Reynolds number
- Nickel plate aluminum 90 tooth sprocket to give high Reynolds number
- Nickel plate fan spacer for corrosion resistance

Powder coat all brackets
Ceramic coating on Turbine housing
Powder coat fuel pressure regulator to protect from elements
Powder coat injector tubes
Ceramic coat all adaptors

Sub-Task 2.3.1

Mr. Henry Harness worked with and directed B&A Auto Electric to modify all electronics to be compatible with the DT466 engine and modify the electronics to control the DF2010 retrofit device.

Sub-Task 2.3.1.2

In addition to the purchase and assembly of electronic parts B&A Auto Electric, as a quality control measure, performed engineering electronic computer modeling for both air flow and resistance. B&A Auto Electric assembled all electronic components and ran bench test: voltage, amperage, fuel flow under simulated engine driving conditions. Matched fuel flow and amperage to engine speed and load. This is actually a second mapping for the operation of the DF2010 retrofit device operating on the DT466 engine.

Section 2. Attachments

Photos: Showing the DF2010 Fuel System mounted on the DT466 engine.

Section 3. Results

The manufacture of the DF2010 Fuel System is completed.

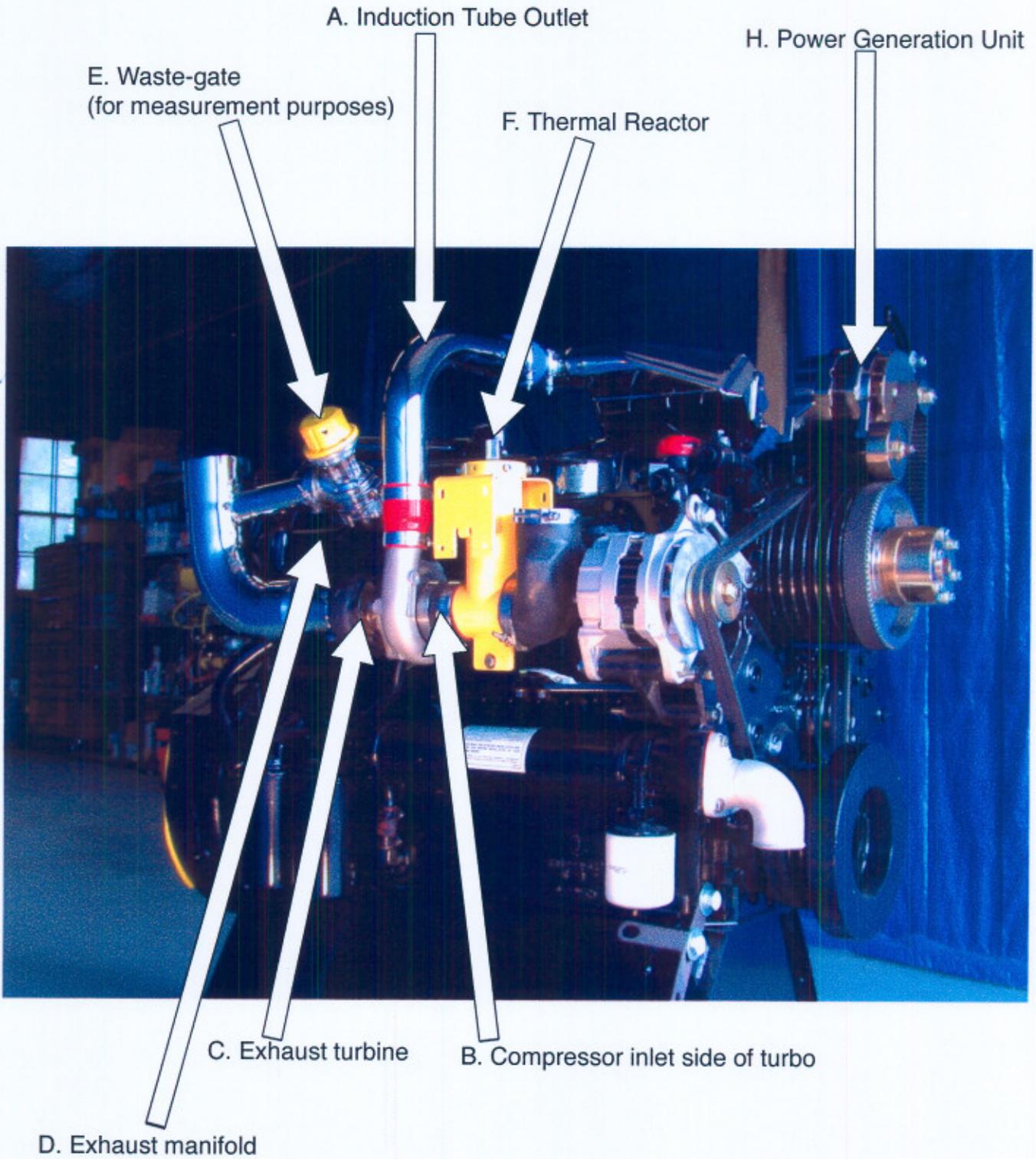
Task 2.3 has been completed

Tom C Bana

Date: 2/8/06

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.

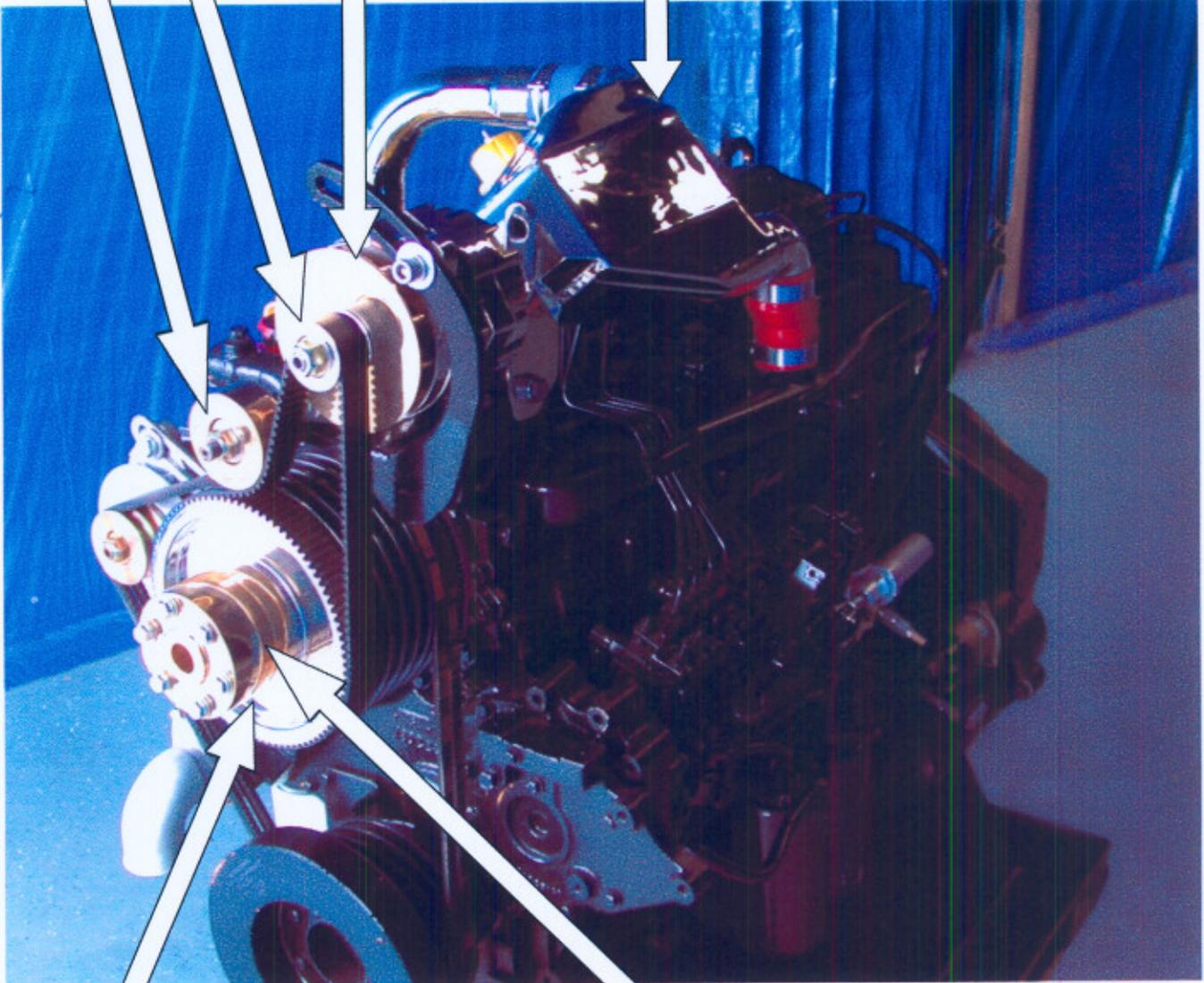


K. Idler pulley

J. 18 tooth drive sprocket

H. Power Generation Unit

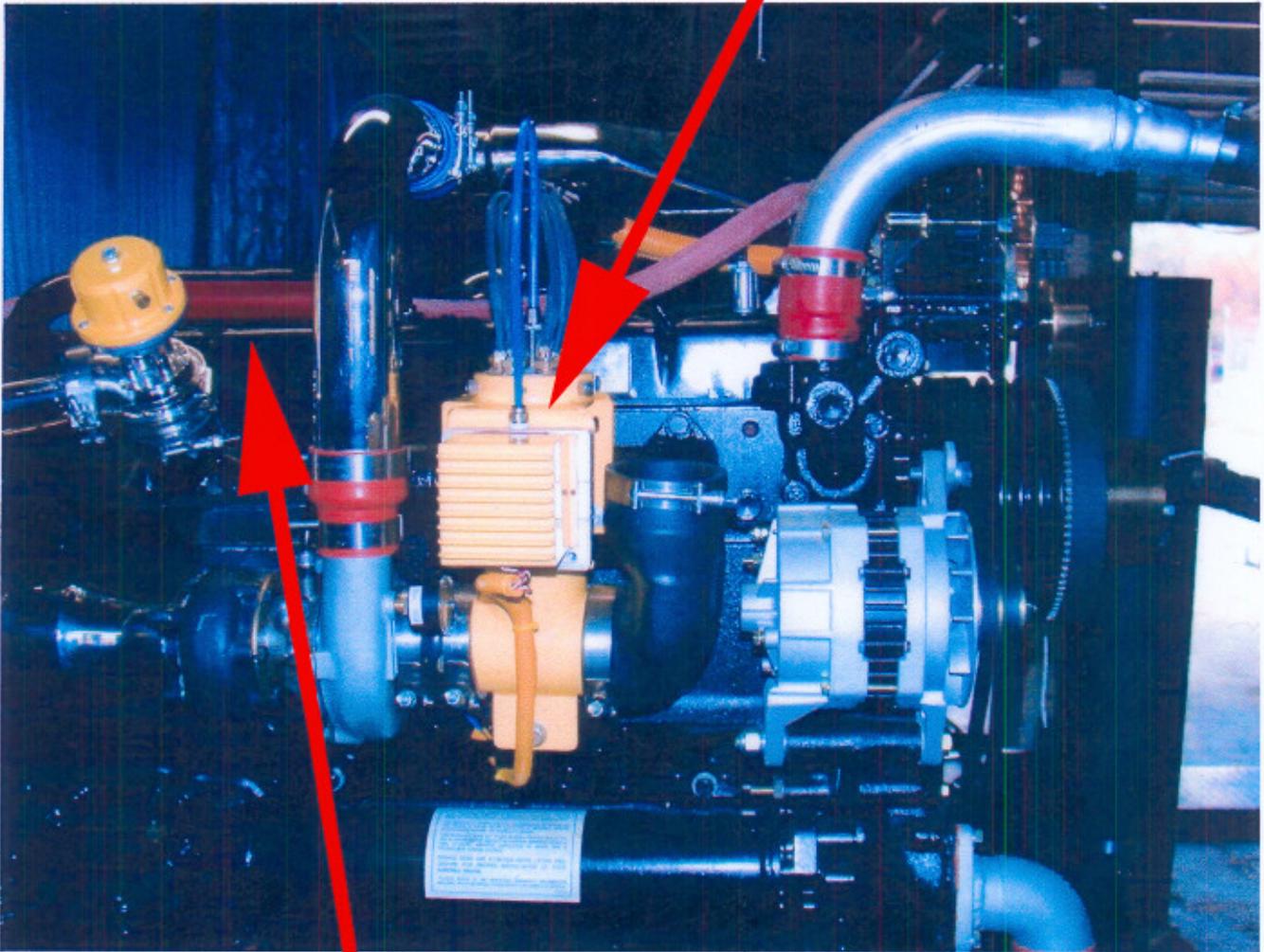
G. Induction tube, after cooler



I. 90 tooth drive sprocket

L. 5 inch spacer

Electronics Module



Electronics Harness To The
Cab