



Rolls Royce Gas Engine

**High Velocity Hot Oil Flush & Chemical Flush
System Decontamination and Purification Project Report
April 2010**

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INTRODUCTION

Industrial Action Services (IAS) was contacted by a customer to perform an emergency decontamination on a Rolls Royce gas engine lubrication system. The objective was to decontaminate the lubrication and cooler oil lines per the customer, OEM, and industry standards with a final targeted ISO particle count of 15/12/10 or better and clean screens.

The Key Benefits of this project resulting from the High Velocity Hot Oil Flush and Chemical Flush:

- Reliable Unit Start Up
- Ensured system & fluid cleanliness
- Minimize future maintenance / repair costs

PRIMARY OBJECTIVES

- Safely and efficiently perform the chemical and oil flush service in a professional manner
- Ensure that each piece of equipment is prepared for commissioning in the expected timeframe and according to the customers, OEM, and industry standards.
- Provide documentation of results confirming successful project completion.

OVERALL SCOPE

- Unload and set-up flushing equipment
- Make flushing equipment connections
- Perform and monitor Flush procedures and sequences
- Flushing to achieve a 15/12/10 ISO particle count and clean screens
- Disconnect all flush equipment, hoses, and fittings
- Load flushing equipment and depart from job site

PROJECT SAFETY

IAS prides itself on working safely on each and every project. On this project IAS worked a total of **482.25 hours** without any safety incidents, near misses or accidents.

EQUIPMENT SET UP – CHEMICAL FLUSH



Non hazardous flushing chemicals were approved for use by the customer's EH&S department. The entire lube oil system was chemically cleaned so was the oil cooler, 60 gallon oil reservoir and oil piping

The process for chemical cleaning was

1. Degrease the system
2. Rinse with plant water
3. Chelation
4. Neutralization
5. Passivate



Internal of 60 gallon reservoir before chemical flush



Internal of 60 gallon reservoir after chemical flush



Internal of 60 gallon reservoir before chemical flush



Internal of 60 gallon reservoir after chemical flush

EQUIPMENT SET UP – OIL FLUSH



Oil Flush Equipment

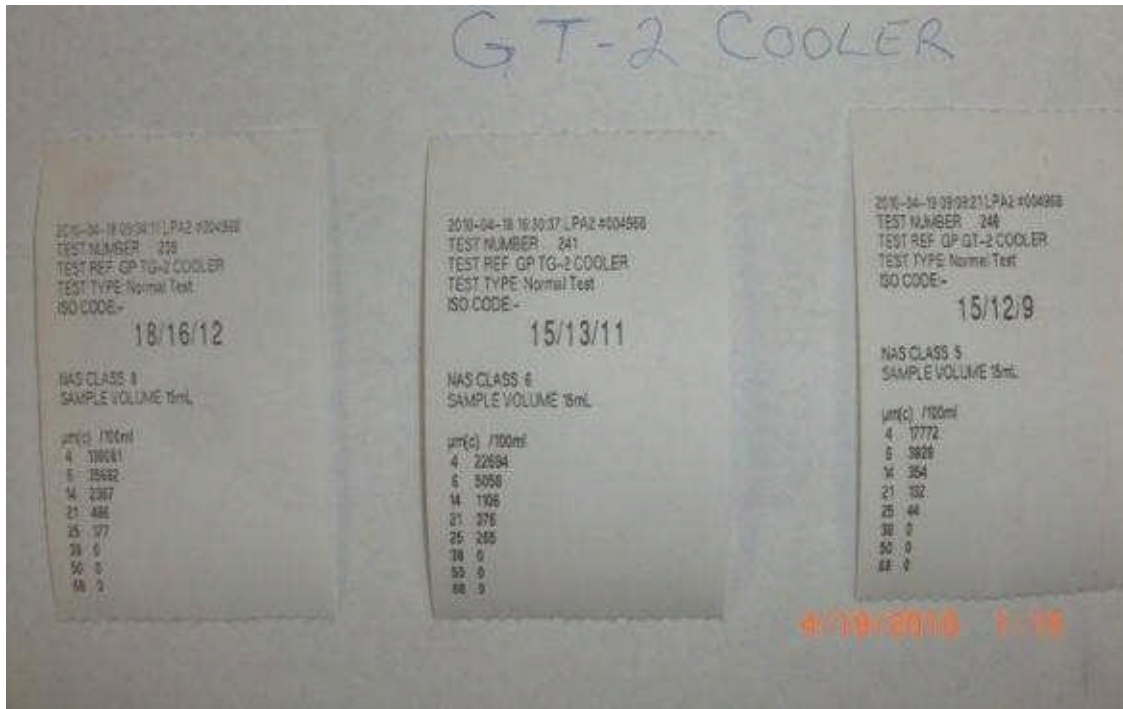


Temporary Oil Flush Reservoir

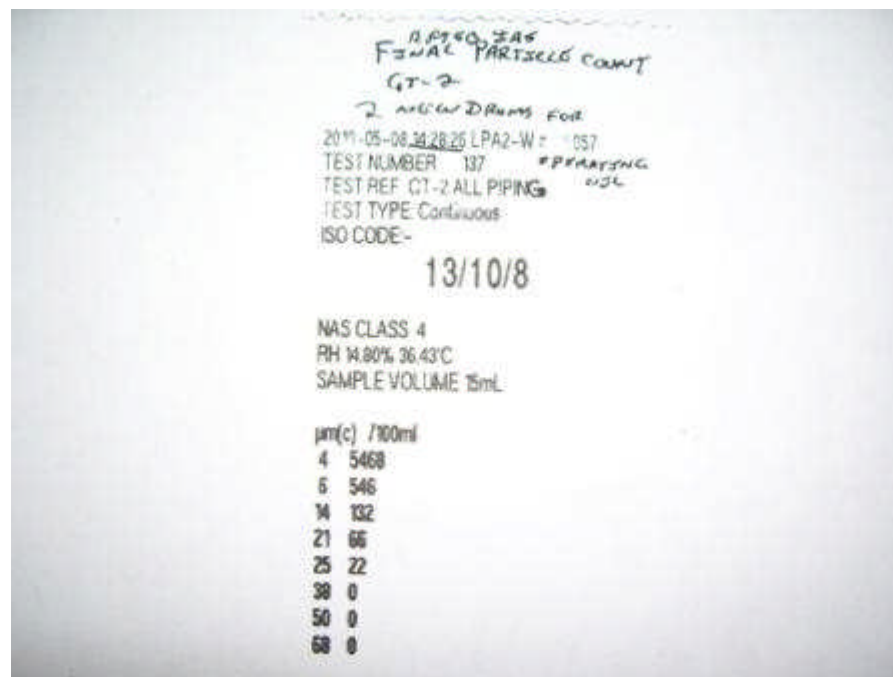
Oil Flush Proving Screens



Final Screen Photo Not Available
Approved by Customer on May 8, 2010 at 0700



Final Particle Count on Oil Cooler



Final Particle Count on Engine Oil Pipes & Reservoir

CONCLUSION

The project was completed to the specifications approved by our customer and Rolls Royce. All inorganic debris and wear metal were successfully removed on Rolls Royce Gas Engine lubrication system. The final particle counts and mesh screen were inspected and approved by our customer and the OEM.

Respectfully Submitted by

Eric Levitt

Reliable Contamination Control LLC Representing IAS Corp.

