

Analyzer Calibration Report



ANALYZER INFORMATION

Model: *ECOM J2K(N)*
 Last Stability Test: *01/15/08*

Serial Number: *1289*
 Last Linearity Test: *01/04/08*

PRE-TEST CALIBRATION / POST-TEST VERIFICATION REQUIREMENTS

Max O2 Zero Error: *0.3% O2*
 Max O2 Cal Error: *0.5% O2*
 Max Zero Drift: *5% SPAN*

Max CO, NO, NO2 Zero Error: *3% SPAN or 1ppm*
 Max CO, NO, NO2 Cal Error: *5% SPAN*
 Max Span Drift: *5% SPAN*

PRE-TEST CALIBRATION / POST-TEST VERIFICATION RESULTS

Pre-Test Calibration Started: *03/15/08 08:24:05*

Post-Test Verification Started: *03/15/08 14:15:47*

	O2 (%)	CO (ppm)	NO (ppm)	NO2 (ppm)	
Pre-Test Zero	0.0	0	0	0	
Post-Test Zero	0.0	2	1	1	
Zero Drift (% SPAN)	0	1	4	1	Drift = ((PreTest Z - PostTest Z)/Cal Gas) * 100
Pre-Test Span	20.9	200	25	100	
Post-Test Span	20.9	203	24	101	
Span Drift (% SPAN)	0	1.5	4	1	Drift = ((PreTest S - PostTest S)/Cal Gas) * 100
Calibration Gas, Ccal	20.9	200 <i>09/13/08</i>	25 <i>11/20/08</i>	100 <i>05/09/08</i>	(Cal gas expiration dates included)

Pre-Test / Post-Test Procedure Results: Completed successfully.

CERTIFICATION: Based on the information and belief formed after reasonable inquiry, I certify that the statements and information contained in this report are true, and accurate.

John Smith, ACME Emission Testing, Inc.

Title

Date

PHYSICAL LOCATION

Operational Area: *South District*Facility Name: *Memorial Hospital*

EQUIPMENT INFORMATION

Equipment Name: *Generator 102*Model: *G3516*Service: *Backup Generator*Unit Number: *G-102*Serial Number: *A099834HH2*

ANALYZER INFORMATION

Model: *ECOM J2K(N)*Last Stability Test: *01/15/08*Serial Number: *1289*Last Linearity Test: *01/04/08*

TEST RECORDING

Sample Time	O2 (%)	CO (ppm)	NO (ppm)	NO2 (ppm)	Notes
17:00:40	20.9	0	0.0	0.0	Begin Ramp-Up Phase
17:00:55	13.4	52	7.3	0.4	
17:01:10	8.7	88	12.6	0.7	
17:01:25	5.6	114	16.6	0.9	
17:01:40	3.7	132	19.6	1.1	
17:01:55	2.5	145	21.8	1.2	
17:02:10	1.7	154	23.4	1.3	
17:02:25	1.2	160	24.6	1.3	
17:02:40	0.9	164	25.5	1.4	
17:02:55	0.7	168	26.1	1.4	
17:03:10	0.5	170	26.6	1.4	
17:03:25	0.4	171	27.0	1.5	
17:03:40	0.4	172	27.2	1.5	
17:03:55	0.4	173	27.4	1.5	
17:04:10	0.3	174	27.6	1.5	
17:04:25	0.3	174	27.7	1.5	
17:04:40	0.3	174	27.8	1.5	
17:04:55	0.3	175	27.8	1.5	
17:05:10	0.3	175	27.9	1.5	
17:05:25	0.3	175	27.9	1.5	
17:05:40	0.3	175	27.9	1.5	Begin Test Phase
17:05:55	0.3	174	28.1	1.5	
17:06:10	0.3	175	27.9	1.5	
17:06:25	0.2	174	27.8	1.5	
17:06:40	0.3	176	28.1	1.5	
17:06:55	0.4	174	28.0	1.5	
17:07:10	0.4	174	27.9	1.5	
17:07:25	0.3	176	27.9	1.5	
17:07:40	0.4	175	27.7	1.5	
17:07:55	0.3	175	27.9	1.5	
17:08:10	0.3	176	27.9	1.5	
17:08:25	0.3	175	28.0	1.5	
17:08:40	0.3	175	27.9	1.5	
17:08:55	0.3	175	28.2	1.5	
17:09:10	0.4	175	27.8	1.5	
17:09:25	0.3	174	28.1	1.5	
17:09:40	0.4	175	28.1	1.5	
17:09:55	0.3	175	28.0	1.5	
17:10:10	0.2	175	27.9	1.5	
17:10:25	0.3	174	27.8	1.5	
17:10:40	0.3	175	28.2	1.5	
17:10:55	0.3	175	28.1	1.5	
17:11:10	0.3	175	28.2	1.5	
17:11:25	0.2	175	28.3	1.5	
17:11:40	0.4	175	28.2	1.5	
17:11:55	0.3	174	28.0	1.5	
17:12:10	0.4	175	28.1	1.5	
17:12:25	0.3	174	27.9	1.5	
17:12:40	0.3	175	28.2	1.5	
17:12:55	0.3	174	27.7	1.5	
17:13:10	0.3	174	27.9	1.5	
17:13:25	0.3	174	28.2	1.5	

Test Date: 02/14/08

Engine Emission Test Recording



Sample Time	O2 (%)	CO (ppm)	NO (ppm)	NO2 (ppm)	Notes
17:13:40	0.3	175	28.1	1.5	
17:13:55	0.3	176	27.8	1.5	
17:14:10	0.3	175	28.1	1.5	
17:14:25	0.3	174	28.0	1.5	
17:14:40	0.4	175	28.0	1.5	
17:14:55	0.3	175	28.0	1.5	
17:15:10	0.4	174	28.1	1.5	
17:15:25	0.3	175	27.7	1.5	
17:15:40	0.4	174	27.9	1.5	
17:15:55	0.3	175	28.0	1.5	
17:16:10	0.3	174	27.8	1.5	
17:16:25	0.2	176	28.0	1.5	
17:16:40	0.3	175	27.9	1.5	
17:16:55	0.3	174	27.8	1.5	
17:17:10	0.2	176	28.0	1.5	
17:17:25	0.2	176	27.8	1.5	
17:17:40	0.2	175	27.9	1.5	
17:17:55	0.3	175	28.0	1.5	
17:18:10	0.4	175	27.8	1.5	
17:18:25	0.3	174	28.0	1.5	
17:18:40	0.3	175	27.9	1.5	
17:18:55	0.3	174	28.0	1.5	
17:19:10	0.4	175	27.9	1.5	
17:19:25	0.3	175	28.0	1.5	
17:19:40	0.3	175	28.1	1.5	
17:19:55	0.3	175	28.1	1.5	
17:20:10	0.2	175	28.2	1.5	
17:20:25	0.3	175	28.0	1.5	
17:20:40	0.3	175	27.9	1.5	End Test Phase
17:20:55	7.8	123	20.7	1.1	
17:21:10	12.5	87	15.4	0.8	
17:21:25	15.6	61	11.4	0.6	
17:21:40	17.5	43	8.4	0.4	
17:21:55	18.7	30	6.2	0.3	
17:22:10	19.5	21	4.6	0.2	
17:22:25	20.0	15	3.4	0.2	
17:22:40	20.3	11	2.5	0.1	
17:22:55	20.5	7	1.9	0.1	
17:23:10	20.7	5	1.4	0.1	
17:23:25	20.8	4	1.0	0.0	
17:23:40	20.8	3	0.8	0.0	
17:23:55	20.8	2	0.6	0.0	
17:24:10	20.9	1	0.4	0.0	
17:24:25	20.9	1	0.3	0.0	
17:24:40	20.9	1	0.2	0.0	
17:24:55	20.9	0	0.2	0.0	
17:25:10	20.9	0	0.1	0.0	
17:25:25	20.9	0	0.1	0.0	
17:25:40	20.9	0	0.1	0.0	End Purge Phase

Test Phase Average Values	0.3	175	28.0	1.5
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Test Date: 02/14/08

Engine Emission Test Report

PHYSICAL LOCATION

Operational Area: *South District*

Facility Name: *Memorial Hospital*

EQUIPMENT INFORMATION

Equipment Name: *Generator 102*
 Model: *G3516*
 Service: *Backup Generator*

Unit Number: *G-102*
 Serial Number: *A099834HH2*

PERMIT INFORMATION

Permit Number: *S-4963*
 Permit Equipment #: *X1-A*
 Permit CO Limit: *82*

Permit Date: *01/10/08*
 Permit Units: *ppm @ 15% O2*
 Permit NOx Limit: *11*

ANALYZER INFORMATION

Model: *ECOM J2K(N)*
 Last Stability Test: *01/15/08*

Serial Number: *1289*
 Last Linearity Test: *01/04/08*

PRE-TEST CALIBRATION / POST-TEST VERIFICATION REQUIREMENTS

Max O2 Zero Error: *0.3% O2*
 Max O2 Cal Error: *0.5% O2*
 Max Zero Drift: *5% SPAN*

Max CO, NO, NO2 Zero Error: *3% SPAN or 1ppm*
 Max CO, NO, NO2 Cal Error: *5% SPAN*
 Max Span Drift: *5% SPAN*

PRE-TEST CALIBRATION / POST-TEST VERIFICATION RESULTS

	O2 (%)	CO (ppm)	NO (ppm)	NO2 (ppm)	
Pre-Test Zero	0.0	0	0	0	
Post-Test Zero	0.0	2	1	1	
Zero Drift (% SPAN)	0	1	4	1	Drift = ((PreTest Z - PostTest Z)/Cal Gas) * 100
Mean Zero, Ccz	0.0	1	0.5	0.5	
Pre-Test Span	20.9	200	25	100	
Post-Test Span	20.9	203	24	101	
Span Drift (% SPAN)	0	1.5	4	1	Drift = ((PreTest S - PostTest S)/Cal Gas) * 100
Mean Span, Ccm	20.9	201.5	24.5	100.5	
Calibration Gas, Ccal	20.9	200 09/13/08	25 11/20/08	100 05/09/08	(Cal gas expiration dates included)

Pre-Test / Post-Test Procedure Results: Completed successfully.

EMISSION TEST RESULTS

Test conducted on the target machine as found. 02/14/08 14:23:04

	O2 (%)	CO (ppm)	NO (ppm)	NO2 (ppm)	NOx (ppm)	
Average Measured, Cmeas	0.3	175	28.0	1.5		
Cal Adjusted, Cadj	0.3	174	28.6	1.0	29.6	NOx = NO + NO2 Cadj = (Cmeas - Ccz) * (Ccal / (Ccm - Ccz))
Cadj @ 15% O2		50			8.5	Cadj @ 15% O2 = Cadj * ((5.9) / (20.9 - O2))
Permit Limit (@ 15% O2)		82			11	

Test Result: Emission levels are below permit limits. (See attached notes.)

CERTIFICATION: Based on the information and belief formed after reasonable inquiry, I certify that the statements and information contained in this report are true, accurate, and representative of the emissions from this source.

John Smith, ACME Emission Testing, Inc.

Title

Date

Test Date: 02/14/08

Engine Emission Test Report



PHYSICAL LOCATION

Operational Area: *South District*

Facility Name: *Memorial Hospital*

EQUIPMENT INFORMATION

Equipment Name: *Generator 102*

Unit Number: *G-102*

Model: *G3516*

Serial Number: *A099834HH2*

Service: *Backup Generator*

PERMIT INFORMATION

Permit Number: *S-4963*

Permit Date: *01/10/08*

Permit Equipment #: *X1-A*

Permit Units: *ppm @ 15% O2*

Permit CO Limit: *82*

Permit NOx Limit: *11*

ANALYZER INFORMATION

Model: *ECOM J2K(N)*

Serial Number: *1289*

Last Stability Test: *01/15/08*

Last Linearity Test: *01/04/08*

PRE-TEST CALIBRATION / POST-TEST VERIFICATION REQUIREMENTS

Max O2 Zero Error: *0.3% O2*

Max CO, NO, NO2 Zero Error: *3% SPAN or 1ppm*

Max O2 Cal Error: *0.5% O2*

Max CO, NO, NO2 Cal Error: *5% SPAN*

Max Zero Drift: *5% SPAN*

Max Span Drift: *5% SPAN*

NOTES

This was a scheduled AS FOUND test and was completed without difficulties.