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FGI SPOOLPIECE HYDROGEN SENSOR RESPONSE TEST REPORT

Keith S. Witwer

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Abstract: This report documents the results of testing of three flammable gas sensors used on the Rotary Mode Core Sampling System (RMCSS) Flammable Gas Interlock (FGI). These sensors, a Detector Electronics Inc. (Detronics), a Sierra Monitor Corp. (SMC), and a Whittaker Electronics Corp. (WEC) can detect flammable gases and terminate the core sampling activity at a predetermined gas concentration. Testing showed that each of the units can adequately detect a hydrogen gas mixture within a specified time frame and be accurate within manufacturers specifications.

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1.0 INTRODUCTION

The purpose of this test report is to document the testing performed under the guidance of Test Plan HNF-SD-WM-TC-074, *Flammable Gas Sensors and SpoolPiece Flow Response Test Plan and Procedure*¹. This testing was performed for Lockheed Martin Hanford Characterization Projects Operations (CPO) in support of Rotary Mode Core Sampling by the Numatec Hanford Company Engineering Testing Laboratory (ETL). The testing was conducted in the 305 Building, ETL facility. The key personnel identified for the performance of this task are as follows:

- Test responsible engineering manager: C. E. Hanson
- 305 ETL responsible manager: M. J. Schliebe
- Cognizant RMCSS Exhauster engineer: E. J. Waldo
- Cognizant 305 ETL engineer: K. S. Witwer

Other support personnel were provided, as necessary, from the 305 ETL.

The testing was done on the flammable Gas Interlock (FGI) system Spool-Piece, which is required to support Rotary Mode Core Sampling (RMCSS) of single shell flammable gas watch list tanks. It took place between 5-5-97 and 5-23-97.

2.0 DESCRIPTION OF TEST

There were two primary purposes for this testing. One was to verify the gas delivery characteristics of the mechanical SpoolPiece system by determining typical sensor response times as installed in their deployed configuration. Earlier testing by Schneider² showed the adequacy of the existing system. A change to the SpoolPiece baffle however required the earlier testing be repeated. Secondly, the existing Sierra Monitor Corporation (SMC) catalytic bead hydrogen sensor has since been identified as not rated for a Class 1, Division 1, Group B environment by the NFPA. Another vendor, Detector Electronics Corporation, has a suitably rated sensor (Detronics) of a similar type. The Detronics sensor was installed on the SpoolPiece and also tested.

The main components of the test setup included metallic and flexible conductive ducting, a blower and flow control valve capable of providing the required duct flow, an accurate flow measuring system, an accurate hydrogen injection gas system, a mechanically equivalent FGI SpoolPiece with sensors, a gas chromatograph (GC) system to validate the duct gas concentrations, a data logger and associated process temperature and pressure instruments. Photo 1 shows an overall view of the test setup. The piping and instrumentation diagram (P&ID) of Figure 1 depicts the test hardware configuration. A listing of the measurement and test equipment used and pertinent calibration records are included in Appendix A.

PHOTO 1 - OVERALL TEST ARRANGEMENT

Photo 2, below, shows the Whittaker sensor as reconfigured to a vertical position for this testing. Photo 3 shows the Detronics sensor mounting which replaces the SMC sensor and associated mounting hardware. Photo 4 shows the inside of the Spool Piece with the baffle plate in the new 90° rotated configuration.

PHOTO 3 - DETRONICS SENSOR MOUNT

PHOTO 2 - WHITTAKER SENSOR MOUNTING

PHOTO 4 - NEW BAFFLE ORIENTATION

The test required a nominal flow of $5.66 \text{ m}^3/\text{min}$ (200 SCFM) through the SpoolPiece. Additional tests at $5.10 \text{ m}^3/\text{min}$ (180 SCFM) were also run to support possible future applications at a lower flow rate. As per field configuration, the blower was positioned downstream of the test setup - pulling the mixed air through the SpoolPiece during operation. The sensor outputs were required to reach 90% of their "final output" value in less than 120 seconds when subjected to a fully mixed gas concentration. (The "final output" value is defined as the sensor output at 15 minutes after the flammable gas is injected.) Hydrogen gas was accurately metered and injected into the main duct 3.96 meters (13 feet) upstream of the sensors to provide a well mixed range of supplied gas concentrations. The equipment was operated in a controlled laboratory environment with nominal ambient temperatures between 20 and 24° C (68 and 75 °F). The FGI SpoolPiece was tested using two diverse types of detection sensors; a hydrogen fuel cell - Whittaker electrochemical cell (WEC), and one of two catalytic bead combustible gas cells - made by Sierra Monitor Corporation (SMC) and Digital Electronics Corporation (Detronics).

FIGURE 1 - TEST CONFIGURATION P&ID

The testing was documented using both manually entered data sheets and an automatic data logging system and are included in Appendix C. The sequences of the test were recorded in a controlled laboratory notebook, HNF-N-3-1¹, and are included in Appendix E.

3.0 TEST RESULTS

3.1 SUMMARY

The testing was separated into two phases. The first phase involved comparison testing of the SMC and WEC sensors - in response to the baffle plate modification (see section 3.2). Table 1, "CONSOLIDATED TEST RESULTS USING SMC AND WHITTAKER SENSORS" presents the data from this phase. The second phase involved comparison testing of the Detronics and WEC sensors. The Detronics sensor is expected to eventually replace the SMC unit because of its higher NFPA rating (Class 1, Division 1, Group B). Table 2, "CONSOLIDATED TEST RESULTS USING DETRONICS AND WHITTAKER SENSORS" presents these data. Both tables present data from a combination of manually and automatically recorded data. Table 3, "SENSOR RESPONSE COMPARISON" summarizes the data from both phases for comparison purposes.

The data were processed using Microsoft® Excel Version 5.0. The GC and process data recorded on the data sheets were single points, nominally six minutes into the sample run, not averaged from the data files. The mixed gas transport time from the injection point to the sensors was calculated at 2 to 3 seconds for all tests. This transport time combined with the 5 second data collection interval should be considered when analyzing sensor response times.

The test plan required that a gas concentration mixture of 200-300 Parts Per Million (PPM) hydrogen be used for the first set of tests (1-1 through 1-3) to verify the accuracy of the gas injection method. The SMC and Detronics sensors are not sensitive enough to accurately detect this low hydrogen concentration and did not achieve a final value close to the GC measured duct concentration. The WEC had more consistent results but was also inaccurate. Regardless, the primary purpose of the low 200 PPM concentration testing was to verify gas injection methodology. Those results are presented here for completeness.

¹ Microsoft is a registered trademark of the Microsoft Corporation in the United States and other countries.

**TABLE 1- CONSOLIDATED TEST RESULTS
USING SMC AND WHITTAKER SENSORS**

TEST DATA FILE ID	DEPT FLOW (GPM)	H ₂ OPMO CONCENTRATION		SOL RESPONSE (MILISECONDS)		240N VALUE (PPM)		14.5 MIN. VALUE (PPM)		1- MIN. VALUE (PPM)	
		MEAS.	CALC.	SAC	WTC	SMC	WTC	SMC	WTC	SMC	WTC
1-1/KW5571_1	200	211	206	45	125**	66.3	144.4	68.9	161.4	69.3* (-67)	162.7 (-24)
1-2/KW5571_2	200	203	201	20	110	41.8	154.4	31	168	71* (-85)	170 (-16)
1-3/KW5571_3	199	205	205	170	85	24.8	157	28.7	166	29* (-86)	166 (-19)
2-1/KW5572_1	199	2100	2144	25	60	1919	1929	1891	1963	1884 (-10)	1963 (-7)
2-2/KW5572_2	201	2282	2290	30	85	2134	1926	2143	2046	2148 (-6)	2050 (-10)
2-3/KW5572_3	198	2324	2304	35	70	2121	1980	2169	2059	2171 (-7)	2055 (-12)
2-4/KW5572_4	199	4100	4093	30	70	3937	3749	3966	3934	3962 (-3)	3934 (-4)
2-5/KW5572_5	201	3947	4055	30	80	3886	3468	3968	3664	3961 (-11)	3663 (-7)

TABLE 1 - CONSOLIDATED TEST RESULTS USING SMC AND WHITTAKER SENSORS											
TEST PASS* FILE ID	TEST FLOW (SCFH)	H ₂ (PPM) CONCENTRATION		90% RESPONSE TIME (SECONDS)		240N VALUE (PPM)		143N VALUE (PPM)		30MIN VALUE (PPM)	
		MEAS	CALC	SMC	WEC	SMC	WEC	SMC	WEC	SMC	WEC
2-6/KW5672_6	199	3875*	3972*	30	75	3885	3417	3895	3630	3886	3636
										(-1)	(-6)
2-7/KW5272_7	202	6860	6874	30	80	6657	6310	6740	6761	6744	6764
										(-2)	(-1)
2-8/KW5272_8	202	6920	6924	30	80	6682	6335	6809	6773	6804	6781
										(-2)	(-2)
2-9/KW5272_9	200	6885	6854	30	85	6629	6215	6787	6701	6802	6704
										(-1)	(-3)
3-2/KW5673_2	181	1985	2061	55	90	1795	1888	1831	2033	1825	2035
										(-8)	(+3)
3-3/KW5673_3	182	4011	4108	60	95	3759	3723	3840	3988	3843	3983
										(-4)	(-1)
3-4/KW5773_4	182	6044	6280	50	85	5862	5681	5887	6091	5904	6085
										(-2)	(+1)

* The hydrogen concentration is too low for the catalytic bead sensor to provide a consistent and accurate reading.

** The data acquisition system records at 5 second intervals. This, combined with an approximate 2-3 second transport time, puts the response time of the Whittaker cell within the two minute, 90% response time requirement.

TABLE 2- CONSOLIDATED TEST RESULTS
USING DETRONICS AND WHITTAKER SENSORS

TEST DATA FILED	DUCT FLOW (SCFM)	H ₂ (PPM) CONCENTRATION MEAS. / CALC.	90% RESPONSE TIME (SECONDS)		2 MIN. VALUE (PPM)		14.5 MIN. VALUE (PPM)		15 MIN. VALUE (PPM) DETRONICS W/EC (N-230) FROM MEAS. VALUE		
			DETRONICS	W/EC	DETRONICS	W/EC	DETRONICS	W/EC	DETRONICS	W/EC	
1-1/K52271_1	199	194	190	N/A*	80	0	200	0	218	0*	219 (+13)
1-2/K52271_2	199	195	188	N/A*	70	0	218	0	228	0*	225 (+15)
1-3/K52271_3	201	246	235	15	75	101	259	101	274	101	275 (+12)
2-1/K51972_1	199	2198	2216	15	90	2100	2052	2100	2205	2100	2207 (-4)
2-2/K51972_2	200	2187	2225	15	85	2100	2074	2100	2228	2151	2228 (-2)
2-3/K52072_3	198	2246	2236	15	90	2100	2226	2201	2400	2201	2395 (-2)
2-4/K52072_4	198	3957	4032	15	80	4002	3969	4104	4251	4104	4251 (+4)
2-5/K52072_5	198	4148	4205	15	95	4211	4040	4303	4377	4303	4387 (+4)
2-6/K52072_6	198	4120	4213	15	80	4211	4154	4303	4426	4303	4425 (+4)
2-7/K52172_7	198	5199	6410	15	80	6503	6242	6607	6644	6607	6632 (+7)

**TABLE 2 - CONSOLIDATED TEST RESULTS
USING DETRONICS AND WHITAKER SENSORS**

TEST DATA FILE ID	DOCT FLOW (GPM)	H ₂ O/PHO CONCENTRATION MEAS. CALC	90% RESPONSE TIME (SECONDS)	4 SECS. VALUE (PPM)	14 SECS. VALUE (PPM)	90 SECS. VALUE (PPM)	90 SECS. VALUE WITH 1% ERROR FROM MEAS. VALUE				
2-8K52172_8	197	4096	6431	15	95	6503	6082	6607	6629	6607 (+3)***	6611 (+3)***
2-9K52272_9	199	6446	6346	15	95	6503	5958	6607	6468	6607 (+2)	6466 (+1)
3-1K52373_1	181	215	204	25	305	198	214	198	257	198 (-8)	258 (+20)
3-2K52373_2	180	2060	1994	30	90	2002	1828	2100	1975	2100 (+2)	1971 (-4)
3-3K52373_3	180	4277	4168	30	85	4303	3843	4504	4126	4504 (+5)	4122 (-4)
3-4K52373_4	180	6675	6504	30	85	6405	5964	6557	6397	6607 (-1)	6403 (-4)

* The hydrogen concentration is too low for the catalytic head sensor to provide a consistent and accurate readout.

** The data acquisition system records at 1 second intervals. This, combined with an approximate 2.3 second transport time, puts the response time of the Whitaker cell within the two minute, 90% response time requirement.

*** Test 2-8K52172_8 uses the HT calculated value rather than the measured value for finding % error from measured value. The measured value was in error due to a GC problem as discussed in the Lab notes in Appendix E.

As seen in Table 1, the SMC sensor gives inconsistent values for the 200 PPM concentration in the phase 1 testing. The catalytic bead sensor has difficulty obtaining consistent values at this low hydrogen concentration. Earlier testing (Schneider) did show more consistent values, but they were also consistently low - by as much as 78% from the GC measured value.

Table 3 shows a comparison of sensor response times (to reach 90% of final 15 minute value) before and after rotation of the SpoolPiece baffle plate. The table serves two functions. First, it compares the response and accuracy of the SMC and WEC sensors before and after rotation of the baffle plate. (Earlier testing by Schneider used the SpoolPiece with the baffle plate rotated 90° circumferentially from the current configuration. After testing was completed, the field unit was discovered to have this 90° offset baffle plate and new testing was required to verify that the earlier test results were valid in the new rotated baffle position.) Secondly, Table 3 also compares the response of the SMC to the DeTronics (which replaces the SMC). Note that these values are the mean average of all obtained values (both at 180 and 200 SCFM duct flow) for a given sensor at a given PPM. Note also that the PPM values shown in the table are "target" values and vary somewhat during the actual tests. The exact PPM values for this testing can be found in Appendix C, and the previous testing (or "Before Baffle Rotation") values can be found in Schneider's report, HNF-SD-WM-TRP-275. (Whittaker sensor results taken from Schneider's testing only include those obtained after a sample tube modification was made. Test results obtained before the modification was made were not appropriate for comparison purposes.)

TABLE 3 - SENSOR RESPONSE COMPARISON
SHOWING TIME TO REACH 90% OF FINAL (15 MINUTE) VALUE

TARGET PPM	BEFORE BAFFLE ROTATION		AFTER BAFFLE ROTATION		
	SMC (seconds)	WHITTAKER (seconds)	SMC (seconds)	WHITTAKER (seconds)	DETRONIC (seconds)
200	25.8	88.3	78.3	90.8	20
2000	28.3	83.3	36.2	82.5	18.8
4000	28.5	85.4	37.5	81.2	18.8
6000	30	93.3	35	85.6	18.8

The Whittaker cell "After Baffle Rotation" result in Table 3 at 200 PPM includes only the 200 SCFM value. The 200 PPM test at 180 SCFM was not performed by Schneider and thus was not available for comparison. As mentioned earlier, analysis of results from Table 3 should focus on the 2000 to 6000 PPM hydrogen concentrations when comparing sensor response times.

The results in Table 3 show that,

1. The rotation of the baffle plate caused a small increase in response time of the SMC unit and a very small decrease in the response time of the Whittaker sensors overall. Note however that the low PPM results for the SMC show a tripling of the response time. The SMC is very sensitive to where the "zero" point is set during calibration and indications for very low gas concentrations can be dramatically affected by this setting - as is seen above. Nevertheless, the sensors are not intended for use at these low concentrations and the results are presented merely for information. The 2000 to 6000 PPM results are the items of interest.

2. The Detronics sensor performs well - almost twice as fast as the SMC sensor.

In addition, an analysis of Tables 1 and 2 " % error from measured (GC) value" show that the average error of the Detronics sensor is only 3.33% , compared to 3.92% for the SMC and 4.75% for the Whittaker cell (all excluding the 200 PPM results).

3.2 TEST EXCEPTIONS

The test plan allowed for some flexibility in test methodology. However, some changes in testing warranted documentation in the form of a Test Exception. In addition, some elements that were included in the test plan require modification of the existing site drawings. These modifications were documented as Test Exceptions. All of these Test Exceptions affect current site drawings and should be incorporated as appropriate. The exceptions are listed and summarized below. The original Test Exception sheets can be found in Appendix D.

3.2.1 TE 1 - SpoolPiece Baffle Rotation

The baffle plate located inside the SpoolPiece (SiteDrawing H-14-00904, Sht 2) provides a pressure differential which allows the sensors to sample the gas stream. Small, 1/4" diameter tubes placed on the high pressure upstream side and the low pressure downstream side provide a sample flow for the sensors. The test SpoolPiece baffle plate was installed 90° circumferentially offset from the field unit baffle plate. This discrepancy required rotating the baffle plate to match the field unit and subsequently perform the subsequent first phase of comparison testing.

3.2.2 TE 2 - Sample Tube Wall Thickness Modification

The stainless steel sample tubes feeding the hydrogen sensors are specified in the site drawings (H-14-00904, Sht 2) as having 0.065" wall thickness. However, the test SpoolPiece was made with 0.035" wall tubing and was also tested previously with the thinner wall. The field unit currently has the thicker wall tubing. Sensor response time has been shown to be improved with increased flow to the sensors and the 0.035" wall tubing provides this increased flow. This testing was therefore also run with the thinner wall tubing.

3.2.3 TE 3 - Whittaker Cell Vertical Mounting Modification

Earlier testing by Schneider indicated that a vertical mounting would eliminate electrolyte gas bubble migration problems with the Whittaker cell (Schneider, Sec 4.2.1). A vertical mount identical to the current horizontal mount was fabricated and the Whittaker cell

was tested in this vertical orientation. A sealed stainless steel plate was placed over the horizontal mount.

3.2.4 TE 4 - Electronics Junction Box Relocation

Although not directly affecting this testing, moving the Whittaker cell from the horizontal to vertical mounting will require relocation of the signal junction box located just above the SpoolPiece. The clearance currently provided is inadequate and the box will need to be raised approximately six inches to provide the proper clearance.

3.2.5 TE 5 - Replacement of SMC Sensor with Detronics Sensor

The SMC sensor was found to be not rated for Class 1, Division 1, Group B environments and a replacement unit made by Detector Electronics Corp. (Detronics), which does meet the above rating, was obtained. The second phase of testing replaced the SMC with the Detronics unit.

3.2.6 TE 6 - FIELD CALIBRATION OF ROSEMOUNT TRANSMITTER

The Rosemount Transmitter, PT-2, used to monitor absolute pressure on the hydrogen gas injection line, expired calibration on May 6, 1997. The Site Physical and Electrical Calibration Services (SPECs) was unable to calibrate this type of unit due to malfunctioning equipment in their facility. An identical transmitter, Cal # 355-80-02-056, was available in the lab and was used instead until it's calibration expired on May 10, 1997. At that time, since SPECs had no projected date for repair of their equipment, a field calibration was done using a still-calibrated unit of identical type and range (cal # 750-80-02-026). Simultaneous pressure applied to both units revealed a less than ± 0.02 PSI error over the usable range of the transducer (0 to 30 PSIA). The additive possible error of both units (± 0.04 PSI) is within the manufacturers specifications of ± 0.06 PSI. PT-2 provides an indication of expected gas concentration and does not affect the final measurement of the gas stream by the GC and the hydrogen sensors.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The primary purpose of the testing was to verify the response time of the flammable gas sensors in simulated field conditions. The response time requirement from WHC-SD-WM-8AD-035, *A Safety Assessment of Rotary Mode Core Sampling in Flammable Gas Single Shell Tanks*⁶, was that the sensor output would achieve 90% of the final value in 120 seconds or less. Although there is no stated accuracy requirement in WHC-SD-WM-8AD-035, the test plan suggested that the sensor outputs be compared to the GC measured gas concentrations to determine their ability to accurately represent the duct gas concentrations.

4.1 CONCLUSIONS

1. The rotation of the baffle plate had little effect, if any, on sensor performance (as seen in phase 1 of testing) and allowed a reasonable baseline for comparison testing of the sensors in phase 2.
2. The Detronics and WEC flammable gas monitoring cells both easily meet the required 90% of final (15 minute) value response times in the simulated exhaust duct and Spool-Piece flow and pressure conditions.
3. Both sensors stayed within 10% of the actual gas chromatograph measured concentrations between 2,000 and 6,500 PPM. Adequate testing was not performed to completely characterize the accuracy of the two sensors over their entire operating range or over an extended time. The sensors were not able to accurately measure the very low 200 PPM concentrations of hydrogen; however, the testing at the additional nominal concentrations of 2,000, 4,000 and 6,000 PPM indicate that the sensors are accurate.

4.2 RECOMMENDATIONS

1. The Detronics and Whittaker sensor should be incorporated into the field SpoolPiece assembly as tested.
2. Five test exceptions (TE-1 through TE-5) involve modifications to the SpoolPiece assembly and should be incorporated into current site drawings as well as to the field SpoolPiece assembly.

5.0 REFERENCES

1. HNP-SD-WM-TC-074, *Flammable Gas Sensor and SpoolPiece Flow Response Test Plan and Procedure*, Rev. 0, SGN Eurlisys Services Corporation, Richland Washington, May 01, 1997.
2. HNP-SD-WM-TRP-275, *Flammable Gas Interlock SpoolPiece Flow Response Test Report*, T.C. Schneider, March, 1997.
3. HNP-N-3-1, *Testing and System Development Notes for 305 Engineering Testing Laboratory*, Hanford Nuclear Facility, K.S. Witwer, custodian, 1/8/97.
4. WHC-SD-WM-SAD-035, *A Safety Assessment of Rotary Mode Core Sampling in Flammable Gas Single Shell Tanks*, Rev. 0A, Los Alamos National Laboratory, Los Alamos New Mexico, August 1996.

APPENDIX A - MEASUREMENT AND TEST EQUIPMENT DATA SHEET

FE-1 Main Duct Flow Element

Lammar Flow Element, Meriam Inst. Model 50MC2-A,
Serial No. 757200-K1
Range: 0-424.6 SCFM air at std. temp./press.
Accuracy: $\pm 1.0\%$ of reading
Cal. Std.: Vendor Cal. Record Curve

FT-1 Main Duct Flow Xmitter

Diff. Press., Rosemount, Model 3051CD, Serial No. 32086
Range: 0-2.5"H₂O
Accuracy: $\pm 0.1\%$ FS
Cal. Std.: Std. Lab. No. 750-80-02-026
Cal. Due Date: 2-3-98

PT-1 Main Duct Press Xmitter

Abs. Press., Rosemount, Model 3051CD, Serial No. 65843
Range: 0-30 psia
Accuracy: $\pm 0.1\%$ FS
Cal. Std.: Std. Lab. No. 750-80-02-023
Cal. Due Date: 2-3-98

FE-2 Injection Flow Element

Lammar Flow Element, Meriam Inst. Model 50M10-10,
Serial No. 753510-J3
Range: 0-1.6887 SCFM air at std. temp./press.
Accuracy: $\pm 1.0\%$ of reading
Cal. Std.: Vendor Cal. Record Curve

FT-2 Injection Flow Xmitter

Diff. Press., Rosemount, Model 3051CD, Serial No. 33807
Range: 0-2.5"H₂O
Accuracy: $\pm 0.1\%$ FS
Cal. Std.: Std. Lab. No. 750-80-02-025
Cal. Due Date: 2-3-98

PT-2 Injection Press Xmitter

Abs. Press., Rosemount, Model 3051CD, Serial No.
0366492
Range: 0-30 psia
Accuracy: $\pm 0.1\%$ FS
Cal. Std.: Std. Lab. No. 355-80-02-055
Cal. Due Date: 5-6-97

or

Serial No. 165720
Cal. Std.: Std. Lab. No. 355-80-02-056
Cal. Due Date: 5-10-97

FI/FCV-3 GC Bypass Flow	Rotameter with outlet control valve, Wallace & Tiernan, Model 32E083S1XX3 Range: 0-2.5 CFH air Accuracy: $\pm 10\%$ FS Cal.: Test Log Comparison (Indication Only)
FI-4 GC Sample Flow	Rotameter, Matheson, Model FM-1050 E1-4V101-E910 Range: 0-100 cc/min air Accuracy: $\pm 5\%$ FS Cal.: Test Log Comparison (Indication Only)
FI/FCV-5 GC Cal. Flow	Rotameter with inlet control valve, Wallace & Tiernan, Model 32E083S1XX2 Range: 0-2.5 CFH air Accuracy: $\pm 10\%$ FS Cal.: Test Log Comparison (Indication Only)
TE-1	Type K stainless steel jacketed thermocouple Cal.: Std. Lab. No. 750-78-02-013 S/N 002 Cal. Due Date: 2-5-98
TE-2	Type K stainless steel jacketed thermocouple Cal.: Std. Lab. No. 750-78-02-013 S/N 236 Cal. Due Date: 2-5-98
TE-3	Type K stainless steel jacketed thermocouple Cal.: Std. Lab. No. 750-78-02-013 S/N 001 Cal. Due Date: 2-5-98
TE-4	Type K stainless steel jacketed thermocouple Cal.: Std. Lab. No. 750-78-02-013 S/N 400 Cal. Due Date: 2-5-98
GC-1 H ₂ Concentration Std.	Dual Column GC, Micro-sensor Tech. Inc., Model M200D, Serial No. 150313 Range: 100-30,000 PPM Accuracy: 10% Reading Cal.: Standard Gas per Appendix F-3
PC-1 GC Control Computer	Lap Top PC, NEC Versa 4050C, Property No. WC59910 Range: N/A Accuracy: N/A

DL-1 System Data Logger	H-P Data Logger, Model 3497A, Serial No. 2222A09660 Range and Accuracy: 0-0.1 Vdc ($\pm 18 \mu\text{Vdc}$), 0-100 Vdc ($\pm 0.3 \text{mVdc}$), T/C ($\pm 1^\circ\text{C}$) Cal.: Std. Lab. No. 752-67-11-002 Cal. Due Date: 2-5-98
NTT-1 Whitaker Sig. Cond.	Newport Infinity Voltmeter, Model INFU-0010-DC1 Range: Input (Nom. 0-1mV DC), Output 4-20mA DC Accuracy: Input $\pm 0.005\%$ of readings, Output: $\pm 0.1\%$ Full Scale Calibration performed by Appendix F-2 using standard gases and input from the WEC under test
NE-1 Whitaker Sensor	Electro-Chemical Cell, Whitaker, Model 109D020-2, Serial No. HS-1229 Range: 0-10% H_2 by Volume Accuracy: $\pm 0.2\%$ Absolute Cal.: Standard Gas per Appendix F-2
NE-2 SMC Sensor	Combustible Gas Module, Sierra Monitor Corp., Model 4101-02, Serial No. 96-B-4455 Range: 0-100% LFL H_2 Accuracy: $\pm 3\%$ FS Cal.: Standard Gas per Appendix F-1
NE-3 DETROMCS Sensor	Combustible Gas Transmitter/Controller, Digital Electronics Corporation, Serial No. H1147, Model U8700 Range: 0-100% LFL Combustible Gas Accuracy: $\pm 3\%$ full scale up to 2.5% methane, by volume in air; Cal: Per Detronics Calibration Form 95-8390-01.
Hand held Digital Multimeter	Fluke Model 702, Serial No. 6240608 Cal.: Std. Lab. No. 750-13-71-001 Cal. Due Date: 12-06-97
Reference Rotameter	Wallace and Tiernan Model NPXQ-143 Range: 0-6 SCFH Accuracy: $\pm 10\%$ FS Cal.: Std. Lab. No. 750-28-13-005 Cal. Due Date: 01-23-98

APPENDIX B - GAS BOTTLE RECORDS

The following information was obtained from cylinder labels attached to the certified standard calibration and injection gases used.

1. The gas used to calibrate the WEC and SMC sensors:

- * Vendor: Scott Specialty Gases
- * PO No. 023372
- * Project No. 08-27000
- * Cylinder Item No.
- * Certified Concentration 8070 PPM H_2 , balance air

2. The gas used to calibrate the gas chromatograph:

- * Vendor: Scott Specialty Gases
- * PO No. WGS-YVV-412195
- * Project No. 05-79110
- * Cylinder No. M11642, item 05022343 4A
- * Certified Concentration 1,910 PPM H_2 , balance N_2
- * Analytical Accuracy $\pm 2\%$

3. The gas initially used for low concentration injection gas:

- * Vendor: Scott Specialty Gases
- * PO No. WGS-YVV-455801
- * Project No. 05-79110
- * Cylinder No. A816648, item 05022342 4A
- * Certified Concentration 30,000 PPM H_2 , balance N_2
- * Analytical Accuracy $\pm 2\%$

4. The gas used for subsequent low concentration injection gas:

- * Vendor: Scott Specialty Gases
- * PO No. WGS-YVV-455801
- * Project No. 07-37904
- * Cylinder No. ALM046117, item 07022342 4AL
- * Certified Concentration 5.00% H_2 , balance N_2
- * Analytical Accuracy $\pm 2\%$

5. The gas used for the high concentration injection gas was the standard high purity H_2 supplied from the site stores (Cat. No. 21-2870-100).
6. The gas used for the gas chromatograph carrier and purging of the systems was the standard pre-purified N_2 supplied from the site stores (Cat. No. 21-3440-220).

APPENDIX C - MANUALLY ENTERED DATA SHEETS AND SENSOR OUTPUT GRAPHS

Following are the manually entered data sheets and graphs of the sensor outputs for each test run. The graphs are generated directly from the data acquisition files which are included in Appendix G.

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 1-1 DATA FILE No. GC00571-1 OR KW5571-1
 SMC ID No. _____ WHITTAKER ID No. 451229
 DETRONICS ID No. N/A

MANIFOLD FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 200 CFM
 DIFF. PRESS. 3.41 "H₂O ABS. PRESS. 14.51 PSIA TEMP. 74 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.13 SEC

INJECTION FLOW PARAMETERS:

-(using 99% H₂ at viscosity = 177.16)
 DESIRED H₂ CONCENTRATION 200 ppm MEASURED H₂ CON. 211 ppm Calculated H₂ con 206 ppm
 DIFF. PRESS. 3.87 "H₂O ABS. PRESS. 14.77 PSIA TEMP. 75.5 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES

SMC 66.3 ppm WHITTAKER 144.4 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 68.92 ppm WHITTAKER 161.4 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 69.12 ppm 69.3 WHITTAKER 162.7 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/3/97

Date

TEST DIRECTOR [Signature] 5/3/97

Date

Test 1-4
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

PGI FLOW TEST DATA SHEET

TEST ID No. 1-2 DATA FILE No. GC 88671-2 IN Kw4671-2
 SMC ID No. _____ WHITTAKER ID No. H51229
 DETRONICS ID No. N/A

MAINFLOW FLOW PARAMETERS

REQUIRED FLOW 200 CPM CALCULATED FLOW 200 CPM
 DIFF. PRESS. 3.77 ^{in H₂O} ABS. PRESS. 17.54 PSIA TEMP 73.9 °F
 DUCT LENGTH 1.3 FT FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.13 SEC.

INJECTION FLOW PARAMETERS

DESIRED H₂ CONCENTRATION 200 ppm MEASURED H₂ CON 203 ppm Calculated H₂ CON 201 ppm
 DIFF. PRESS. 3.76 ^{in H₂O} ABS. PRESS. 14.8 PSIA TEMP 73.8 °F

SENSOR CONCENTRATION QUIPPI

2 MINUTE CONCENTRATION VALUES:

SMC 41.8 ppm WHITTAKER 154.4 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 31 ppm WHITTAKER 168 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 31 ppm WHITTAKER 170 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 4/6/97

Date

TEST DIRECTOR [Signature] 5/6/97

Date

Note: Some welding (in the lab) in the laboratory near the test rig caused an interference with the data acquisition system. This interference is seen as large spikes on the SMC output between 300 & 500 seconds.

[Signature]

Test 1-2
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 1-3 DATA FILE No. 000000-3 DL K02671-3SMC ID No. _____ WHITTAKER ID No. 451229DETROINCS ID No. N/A

MAINT FLOW PARAMETERS:

REQUIRED FLOW 200 CFMCALCULATED FLOW 199 CFMDIFF. PRESS. 3.78 H₂O ABS. PRESS. 14.57 PSIATEMP. 74 °F

DUCT LENGTH _____ FT. FLOW VELOCITY _____ FPM

TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 200 ppmMEASURED H₂ CON. 205 ppmCalculated H₂ Con 205 ppmDIFF. PRESS. 3.84 H₂O ABS. PRESS. 14.52 PSIATEMP. 74.8 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 24.8 ppmWHITTAKER 157 ppmDETROINCS N/A ppm

14 MINUTE TO SECOND CONCENTRATION VALUES:

SMC 28.9 ppmWHITTAKER 166 ppmDETROINCS N/A ppm

13 MINUTE CONCENTRATION VALUES:

SMC 29 ppmWHITTAKER 166 ppmDETROINCS N/A ppmTEST PERFORMER [Signature] 5/4/97

Date

TEST DIRECTOR [Signature] 5/4/97

Date

Test 1-3
Using SMC and Whittaker Cell at 200 SCP#8

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

PCI FLOW TEST DATA SHEET

TEST ID No. 2-1 DATA FILE No. GC 050272-1 DL KJ5272-1
 SMC ID No. _____ WHITTAKER ID No. H51229
 DETRONICS ID No. N/A

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 199 CFM
 DIFF. PRESS. 3.79 PSI_A ABS. PRESS. 14.48 PSIA TEMP. 74 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.13 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 2000 ppm GC
 MEASURED H₂ CON. 2100 ppm
 DIFF. PRESS. 1.00 PSI_A ABS. PRESS. 14.34 PSIA TEMP. 74.6 °F

CALCULATED H₂ CON. 2144 ppm

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 1919 ppm WHITTAKER 1929 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 1891 ppm WHITTAKER 1963 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 1884 ppm WHITTAKER 1963 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/2/97

Date

TEST DIRECTOR [Signature] 5/2/97

Date

Test 2-1
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 2-2 DATA FILE No. GC 080572-2 DL 8W5522-2
 SMC ID No. _____ WHITTAKER ID No. H51229
 DETRONICS ID No. N/A

MAIN FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 201 CFM
 DIFF. PRESS. 3.82 H₂O ABS. PRESS. 14.53 PSIA TEMP. 74.1 °F
 DUCT LENGTH 13 FT FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.13 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 2000 ppm GC MEASURED H₂ CON. 2282 ppm
 DIFF. PRESS. 1.063 H₂O ABS. PRESS. 14.41 PSIA TEMP. 74.4 °F

Calculated H₂ con 2290 ppm

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 2134 ppm WHITTAKER 1926 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 2143 ppm WHITTAKER 2046 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 2148 ppm WHITTAKER 2060 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/5/97

Date

TEST DIRECTOR [Signature] 5/5/97

Date

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 2-3 DATA FILE No. CC028572-3 ID. 428572-3
 SMC ID. No. _____ WHITTAKER ID. No. H51229
 DETRONICS ID. No. NA

MAIN DUCT FLOW PARAMETERS

REQUIRED FLOW 200 CFM CALCULATED FLOW 198.4 CFM
 DIFF. PRESS. 3.77 "H₂O ABS. PRESS. 14.52 PSIA TEMP. 74.2 °F
 DUCT LENGTH 13 FT FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.13 SEC

INJECTION FLOW PARAMETERS

DESIRED H₂ CONCENTRATION 2000 ppm MEASURED H₂ CON. 2324 ppm *Calculated H₂ con. 2304 ppm*
 DIFF. PRESS. 3.77 "H₂O ABS. PRESS. 14.41 PSIA TEMP. 75.4 °F

SENSOR CONCENTRATION CHUPTIE

2 MINUTE CONCENTRATION VALUES:

SMC 2121 ppm WHITTAKER 1980 ppm
 DETRONICS _____ ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 2169 ppm WHITTAKER 2059 ppm
 DETRONICS N/A ppm

13 MINUTE CONCENTRATION VALUES:

SMC 2171 ppm WHITTAKER 2059 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 9/6/97

Date

TEST DIRECTOR [Signature] 5/5/97

Date

Test 2-3
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 2-4 DATA FILE No. GC050272-4 OL K105272-4
 SMC ID No. _____ WHITTAKER ID No. 45122-9
 DETRONICS ID No. N/A

MAJOR FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 199 CFM
 DIFF. PRESS. 3.79 H₂O ABS. PRESS. 14.47 PSIA TEMP. 73.7 °F
 DUCT LENGTH 13 FT FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.13 SEC.

DIRECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 4000 ppm MEASURED H₂ CON. 4100 ppm Calc. PPM 4093 ppm
 DIFF. PRESS. 1.915 H₂O ABS. PRESS. 14.4 PSIA TEMP. 74.4 °F

SENSOR CONCENTRATION OUTPUT:

1 MINUTE CONCENTRATION VALUES:

SMC 3937 ppm WHITTAKER 3749 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 3966 ppm WHITTAKER 3934 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 3962 ppm WHITTAKER 3934 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/2/97

Date

TEST DIRECTOR [Signature] 5/2/97

Date

Test 2.4
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

PGI FLOW TEST DATA SHEET

TEST ID. No. 2-6 DATA FILE No. GC/80572-5 DL 8W5572-5
 SMC ID. No. 96-8445A WHITTAKER ID No. H31229
 DETRONICS ID No. N/A

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 220 CFM
 DIFF. PRESS. 3.82 PSI/D ABS. PRESS. 14.51 PSIA TEMP. 77.9 °F
 DUCT LENGTH 13 FT FLOW VELOCITY 6.11 FPM/SEC
 TRANSPORT TIME 2.13 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 4000 ppm GC 60 MEASURED H₂ CON. 3947 ppm Calculated H₂ Con. 4055 ppm
 DIFF. PRESS. 1.883 PSI/D ABS. PRESS. 14.53 PSIA TEMP. 75 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 3986 ppm WHITTAKER 3468 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 3968 ppm WHITTAKER 3664 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 3961 ppm WHITTAKER 3663 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 11/6/97
 TEST DIRECTOR [Signature] 5/5/97

Date:

Date:

Test 2-5
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 2-10 DATA FILE No. GC000672-6 OLKWS672-6

SMC ID. No. 96-8-4455 WHITTAKER ID No. HS1229

DETROINCS ID No. N/A

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM

CALCULATED FLOW 199 CFM

DIFF. PRESS. 3.77 "H₂O ABS. PRESS. 14.55 PSIA

TEMP. 74.5 °F

DUCT LENGTH 13 FT. FLOW VELOCITY 6.11 FT/SEC

TRANSPORT TIME 2.17 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 4000 ppm

MEASURED H₂ CON. 3937 ppm

DIFF. PRESS. 1.85 "H₂O ABS. PRESS. 14.48 PSIA

TEMP. 76.3 °F

*Dropped to 3875 ppm
halfway through test.*

Calculated H₂ Con 3972 ppm

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 3885 ppm

WHITTAKER 3417 ppm

DETROINCS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 3895 ppm

WHITTAKER 3630 ppm

DETROINCS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 3886 ppm

WHITTAKER 3636 ppm

DETROINCS N/A ppm

TEST PERFORMER [Signature] 5/6/97

Date:

TEST DIRECTOR [Signature] 5/6/97

Date:

Test 2-6
Using SMC and Whittaker Cell at 280 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 2-7 DATA FILE No. 00000272-7 DL 605272-7
 SMC ID No. 76-8-485 WHITTAKER ID No. H51229
 DETRONICS ID No. N/A

MAIN GASE FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 201.7 CFM
 DIFF. PRESS. 3.817 H₂O ABS. PRESS. 14.51 PSIA TEMP. 71.6 °F
 DUCT LENGTH 1.3 FT. FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 0.13 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 2000 ppm MEASURED H₂ CON. 6860 ppm CALCULATED H₂ CON. 6874 ppm
 DIFF. PRESS. 3.24 H₂O ABS. PRESS. 14.53 PSIA TEMP. 72.7 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 6657 ppm WHITTAKER 6310 ppm
 DETRONICS N/A ppm

14 MINUTE TO SIXTY SECOND CONCENTRATION VALUES:

SMC 6740 ppm WHITTAKER 6761 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 6744 ppm WHITTAKER 6764 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/12/97

Date

TEST DIRECTOR [Signature] 5/12/97

Date

Test 2-7
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 2-8 DATA FILE No. GC050872-8 DL605272-8
 SMC ID. No. 96-8-4455 WHITTAKER ID No. HS1227
 DETRONICS ID No. N/A

MAIN DUCT FLOW PARAMETERS

REQUIRED FLOW 200 CFM CALCULATED FLOW 761.6 CFM
 DIFF. PRESS. 3.819 IN. H₂O ABS. PRESS. 14.51 PSIA TEMP. 71.9 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.15 SEC

INJECTION FLOW PARAMETERS

DESIRED H₂ CONCENTRATION 7000 ppm GC MEASURED H₂ CON. 1920 ppm CALCULATED H₂ CON. 6924 ppm
 DIFF. PRESS. 3.26 IN. H₂O ABS. PRESS. 14.54 PSIA TEMP. 72.7 °F

SENSOR CONCENTRATION OUTPUT

2 MINUTE CONCENTRATION VALUES:

SMC 6682 ppm WHITTAKER 6335 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 6809 ppm WHITTAKER 6773 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 6804 ppm WHITTAKER 6781 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/12/97

Date

TEST DIRECTOR [Signature] 5/12/97

Date

Test 2-8
Using SMC and Whittaker Cell at 2HR SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 7-9 DATA FILE No. 00020272-9 DL KW5272-9
 SMC ID. No. 76-8-4455 WHITTAKER ID No. 1151229
 DETRONICS ID No. N/A

MAIN DUCT FLOW PARAMETERS

REQUIRED FLOW 700 CFM CALCULATED FLOW 700 CFM
 DIFF. PRESS. 3.79 "H₂O ABS. PRESS. 14.53 PSIA TEMP. 72.7 °F
 DUCT LENGTH 13 FT FLOW VELOCITY 6.11 FT/SEC
 TRANSPORT TIME 2.13 SEC.

INJECTION FLOW PARAMETERS

DESIRED H₂ CONCENTRATION 7000 ppm GC 6895 → Varied From
 MEASURED H₂ CONCENTRATION 6629 ppm 6856 ppm
 DIFF. PRESS. 3.20 "H₂O ABS. PRESS. 14.58 PSIA TEMP. 72.7 °F
 regulator unstable
 flow

SENSOR CONCENTRATION (PPM)

2 MINUTE CONCENTRATION VALUES

SMC 6629 ppm WHITTAKER 6215 ppm
 DETRONICS N/A ppm

14 MINUTE TO SECOND CONCENTRATION VALUES

SMC 6787 ppm WHITTAKER 6701 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES

SMC 6802 ppm WHITTAKER 6704 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 05/02/97

Date

TEST DIRECTOR [Signature] 5/6/97

Date

Test 2-3
Using SMC and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN
AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 3-2 DATA FILE No. CC050673-2 DL 145673-2
SMC ID No. 96-B-4485 WHITTAKER ID No. 451229
DETROINCS ID No. N/A

MAINDUCT FLOW PARAMETERS:

REQUIRED FLOW 180 CFM CALCULATED FLOW 181 CFM
DIFF. PRESS. 3.42 W.G. ABS. PRESS. 14.55 PSIA TEMP. 71.7 °F
DUCT LENGTH 13 FT. FLOW VELOCITY 5.5 FT/SEC
TRANSPORT TIME 2.36 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 2000 ppm MEASURED H₂ CON. 1985 ppm Calculated H₂ con 2061 ppm
DIFF. PRESS. 857 W.G. ABS. PRESS. 14.43 PSIA TEMP. 73.5 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 1795 ppm WHITTAKER 1888 ppm
DETROINCS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 1831 ppm WHITTAKER 2033 ppm
DETROINCS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 1825 ppm WHITTAKER 2039 ppm
DETROINCS N/A ppm

TEST PERFORMER [Signature] 5/6/97

Date

TEST DIRECTOR [Signature] 5/6/97

Date

Test 3-2
Using SMC and Whittaker Cell at 180 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FCI FLOW TEST DATA SHEET

TEST ID No. 3-3 DATA FILE No. GC00673-3 DL 008673-3
 SMC ID No. 96-8-4455 WHITTAKER ID No. H51229
 DETRONICS ID No. N/A

MAIN FLOW PARAMETERS:

REQUIRED FLOW 180 CPM CALCULATED FLOW 181.5 CPM
 DIFF. PRESS. 3.43 "H₂O ABS. PRESS. 14.54 PSIA TEMP. 72.2 °F
 INLET LENGTH 13 FT FLOW VELOCITY 5.5 FT/SEC
 TRANSPORT TIME 2.36 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 4000 ppm MEASURED H₂ CON. 4011 ppm Calculated H₂ CON. 4108 ppm
 DIFF. PRESS. 1.722 "H₂O ABS. PRESS. 14.48 PSIA TEMP. 73.5 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC 3759 ppm WHITTAKER 3723 ppm
 DETRONICS N/A ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 3840 ppm WHITTAKER 3988 ppm
 DETRONICS N/A ppm

15 MINUTE CONCENTRATION VALUES:

SMC 3843 ppm WHITTAKER 3983 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/6/97

Date

TEST DIRECTOR [Signature] 5/6/97

Date

Test 3-3
Using SMC and Whittaker Cell at 180 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FCI FLOW TEST DATA SHEET

TEST ID No. 3-4 DATA FILE No. GE00073-4 DL 605713-4
 SMC ID No. 96-6-4485 WHITTAKER ID No. 1131229
 DETRONICS ID No. N/A

MAINLINE FLOW PARAMETERS

REQUIRED FLOW 180 CFM CALCULATED FLOW 182.5 CFM
 DIFF. PRESS. 3.41 PSI ABS. PRESS. 14.66 PSIA TEMP. 70.7 °F
 DUCT LENGTH 13 FT FLOW VELOCITY 5.5 FT/SEC
 TRANSPORT TIME 2.36 SEC.

DIRECTION FLOW PARAMETERS

DESIRED H₂ CONCENTRATION 6000 ppm GC. MEASURED H₂ CON. 6044 ppm Calculated H₂ CON 6280 ppm
 DIFF. PRESS. 3.42 PSI ABS. PRESS. 14.69 PSIA TEMP. 71.5 °F

SENSOR CONCENTRATION OUTPUT

2 MINUTE CONCENTRATION VALUES

SMC 5862 ppm WHITTAKER 5681 ppm
 DETRONICS N/A ppm

14 MINUTE TO SECOND CONCENTRATION VALUES

SMC 5887 ppm WHITTAKER 6091 ppm
 DETRONICS N/A ppm

13 MINUTE CONCENTRATION VALUES

SMC 5904 ppm WHITTAKER 6085 ppm
 DETRONICS N/A ppm

TEST PERFORMER [Signature] 5/7/97

Date

TEST DIRECTOR [Signature] 5/7/97

Date

Test 3-4
Using SMC and Whittaker Cell at 180 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 1-1 DATA FILE No. GC 052274 DL 052271-1
 SMC ID No. N/A WHITTAKER ID No. HS1229
 DETRONICS ID No. H1147

MASS FLOW PARAMETERS:

REQUIRED FLOW 200 CPM CALCULATED FLOW 199 CPM
 DIFF. PRESS. 3.80 "H₂O ABS. PRESS. 14.42 PSIA TEMP. 71.7 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
 TRANSPORT TIME _____ SEC.

EJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 200 ppm MEASURED H₂ CON. 199 ppm CALCULATED H₂ CON. 190 ppm
 DIFF. PRESS. 0.877 "H₂O ABS. PRESS. 14.3 PSIA TEMP. 72.7 °F

SENSOR CONCENTRATION OUTPUT:

7 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 199.7 ppm
 DETRONICS 0.7 ppm

14 MINUTE IN SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 218.5 ppm
 DETRONICS 0.7 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 218.75 ppm
 DETRONICS 0.7 ppm

TEST PERFORMER [Signature] 5/22/97

Date

TEST DIRECTOR [Signature] 5/22/97

Date

Test 1-1
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 1-2 DATA FILE No. GC052271-2 DL K52271-2
 SMC ID No. N/A WHITTAKER ID No. H51229
 DETRONICS ID No. H1147

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 199 CFM
 DIFF. PRESS. 2.9 "H₂O ABS. PRESS. 14.42 PSIA TEMP. 72.3 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
 TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 200 ppm MEASURED H₂ CON. 195 ppm CALCULATED H₂ CON. 188 ppm
 DIFF. PRESS. 0.88 "H₂O ABS. PRESS. 14.3 PSIA TEMP. 73.1 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 217.7 ppm
 DETRONICS 675 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 227.9 ppm
 DETRONICS 675 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 225.1 ppm
 DETRONICS _____ ppm

TEST PERFORMER

TEST DIRECTOR

Date

Date

Test 1-2
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN
AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 1-3 DATA FILE No. GC062271-3 BL052271-3
SMC ID. No. N/A WHITTAKER ID. No. 1151229
DETROINICS ID. No. 11147

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 201 CFM
DIFF. PRESS. 3.84 "H₂O ABS. PRESS. 14.42 PSIA TEMP. 72.6 °F
DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 200 ppm MEASURED H₂ CON. 246 ppm CALCULATED H₂ CON. 235 ppm
DIFF. PRESS. 1097 "H₂O ABS. PRESS. 14.29 PSIA TEMP. 73.3 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 259 ppm
DETROINICS 101 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 274 ppm
DETROINICS 101 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 275 ppm
DETROINICS 101 ppm

TEST PERFORMER

Date

TEST DIRECTOR

Date

Test 1-3
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN
AND PROCEDURE

PCI FLOW TEST DATA SHEET

TEST ID No. 2-1 DATA FILE No. GC051972-1 or K51972-1
SMC ID No. N/A WHITTAKER ID No. H51229
BETHONICS ID No. H1147

MAIN BUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 199 CFM
DIFF. PRESS. 3.813 "H₂O ABS. PRESS. 14.33 PSIA TEMP. 72.2 °F
DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 2000 ppm MEASURED H₂ CON. 2198 ppm CALCULATED H₂ CON. 2216 ppm
DIFF. PRESS. 1.077 "H₂O ABS. PRESS. 14.25 PSIA TEMP. 73.5 °F

SENSOR CONCENTRATION INPUT:

1 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2062 ppm
BETHONICS 2100 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2205 ppm
BETHONICS 2100 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2207 ppm
BETHONICS 2100 ppm

TEST PERFORMER

Date

TEST DIRECTOR

Date

Test 2-1
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 2-2 DATA FILE No. GC051972-2 IN. HS1972-2
SMC ID. No. N/A WHITTAKER ID. No. HS1229
DETROINCS ID. No. H1147

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 198 CFM ²⁰⁰
DIFF. PRESS. 3.804 H₂O ABS. PRESS. 14.32 PSIA TEMP. 73.1 °F
DUCT LENGTH 13 FT. FLOW VELOCITY 6.05 FT/SEC
TRANSPORT TIME 2.15 SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 2000 ppm MEASURED H₂ CON. 2197 ppm CALCULATED H₂ CON. 2225 ppm
DIFF. PRESS. 1.072 H₂O ABS. PRESS. 14.24 PSIA TEMP. 74.2 °F

SENSOR CONCENTRATION OUTPUT:

1 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2074 ppm
DETROINCS 2100 ppm

14 MINUTE TO SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2228 ppm
DETROINCS 2100 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2228 ppm
DETROINCS 2151 ppm

TEST PERFORMER [Signature]

Date

TEST DIRECTOR [Signature]

Date

Test 2-2
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN
AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 2-3 DATA FILE No. GC052072-3 DL K82072-3
SMC ID. No. N/A WHITTAKER ID No. H51229
DETROINICS ID No. H1147

MAIN FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 198 CFM
DIFF. PRESS. 3.78 "H₂O ABS. PRESS. 14.37 PSIA TEMP. 71.1 °F
DUCT LENGTH 13 FT. FLOW VELOCITY 6.0 FT/SEC
TRANSPORT TIME 2.15 SEC.

INJECTION FLOW PARAMETERS:

DESIGNED H₂ CONCENTRATION 2000 ppm MEASURED H₂ CON. 2246 ppm CALCULATED H₂ CON. 2236 ppm
DIFF. PRESS. 1.031 "H₂O ABS. PRESS. 14.29 PSIA TEMP. 71.9 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2226 ppm
DETROINICS 2100 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2400 ppm
DETROINICS 2201 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 2395 ppm
DETROINICS 2201 ppm

TEST PERFORMER

TEST DIRECTOR

Date:

Date:

Test 2-3
Using Detronics and Whittaker Cell at 280 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN
AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 2-4 DATA FILE No. GC052072-4 IN. 652072-4
SMC ID. No. N/A WHITTAKER ID No. H51229
DETROINCS ID No. H1147

MAIN DUCT FLOW PARAMETERS

REQUIRED FLOW 200 CFM CALCULATED FLOW 198 CFM
DIFF. PRESS. 3.79 "H₂O ABS. PRESS. 14.38 PSIA TEMP. 71.9 °F
DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS

DESIRED H₂ CONCENTRATION 4000 ppm MEASURED H₂ CON. 3967 ppm CALCULATED H₂ CON. 4032 ppm
DIFF. PRESS. 1.868 "H₂O ABS. PRESS. 14.35 PSIA TEMP. 72.6 °F

SENSOR CONCENTRATION OUTPUT:

3 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 3969 ppm
DETROINCS 4002 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 4251 ppm
DETROINCS 4104 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 4291 ppm
DETROINCS 4104 ppm

TEST PERFORMER [Signature] Date: 5/24/97

TEST DIRECTOR [Signature] Date: 5/20/97

Test 2-4
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

PGI FLOW TEST DATA SHEET

TEST ID. No. 2-5 DATA FILE No. GC062072-5 VL 852072-5
 SMC ID. No. N/A WHITTAKER ID No. H51225
 DETRONICS ID No. H1147

MAIN DUCT FLOW PARAMETERS

REQUIRED FLOW 200 CFM CALCULATED FLOW 198 CFM
 DIFF. PRESS. 3.98 "H₂O ABS. PRESS. 14.39 PSIA TEMP. 71.9 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
 TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS

DESIRED H₂ CONCENTRATION 4000 ppm MEASURED H₂ CON. 4148 ppm CALCULATED H₂ CON. 4205 ppm
 DIFF. PRESS. 1.95 "H₂O ABS. PRESS. 14.39 PSIA TEMP. 73.1 °F

SENSITIVITY CONCENTRATION OUTPUT

2 MINUTE CONCENTRATION VALUES

SMC N/A ppm WHITTAKER 4040 ppm
 DETRONICS 4211 ppm

14 MINUTE 36 SECOND CONCENTRATION VALUES

SMC N/A ppm WHITTAKER 4377 ppm
 DETRONICS 4303 ppm

15 MINUTE CONCENTRATION VALUES

SMC N/A ppm WHITTAKER 4387 ppm
 DETRONICS 4303 ppm

TEST PERFORMER [Signature] 5/20/97

Date

TEST DIRECTOR [Signature] 5/20/97

Date

Test 2-5
Using Detronics and Whittaker Cell at 288 SCFM

FLAMMABLE GAS SENSORS AND SPOOL/PIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

PCI FLOW TEST DATA SHEET

TEST ID. NO. 2-6 DATA FILE NO. CC 053072-6 DR. K92072-6
SNC IN. NO. H118 WHITTAKER ID NO. H51229
DETRONICS ID NO. H1177

MASS FLOW PARAMETERS

REQUIRED FLOW 300 CFM

PIPE PRESS. 3.80 IN. AVE. PRESS. 14.39 PSIA

PIPE LENGTH 13 FT.

TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS

MEASURED H₂ CONCENTRATION 4000 ppm MEASURED H₂ CON. 4120 ppm CALCULATED H₂ CON. 4425 ppm

PIPE PRESS. 3.80 IN. AVE. PRESS. 14.39 PSIA

TEMP. 72.5 °F

SECOND CONCENTRATION MINUTE

2 MINUTE CONCENTRATION VALUES:

SNC H118 ppm WHITTAKER 4164 ppm

DETRONICS 4121 ppm

14 MINUTE 10 SECOND CORRELATION VALUES

SNC H118 ppm WHITTAKER 4426 ppm

DETRONICS 4303 ppm

15 MINUTE CONCENTRATION VALUES

SNC H118 ppm WHITTAKER 4425 ppm

DETRONICS 4303 ppm

TEST PERFORMANCE

TEST DIRECTOR _____

Date 4/20/97

Date 4/20/97

Test 2.6
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 2-7 DATA FILE No. GC082072-7 MAK52072-7
 SMC ID No. 14A WHITTAKER ID No. 451229
 DETRONICS ID No. 41147

MAINDUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFM CALCULATED FLOW 198 CFM
 DIFF. PRESS. 3.772 "H₂O ABS. PRESS. 14.46 PSIA TEMP. 72.9 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
 TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 6000 ppm MEASURED H₂ CON. 6199 ppm CALCULATED H₂ CON. 6410 ppm
 DIFF. PRESS. 2.963 "H₂O ABS. PRESS. 14.5 PSIA TEMP. 71.62 °F

SENSOR CONCENTRATION OUTPUT:

1 MINUTE CONCENTRATION VALUES:

SMC 14A ppm WHITTAKER 6242 ppm
 DETRONICS 6503 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC 14A ppm WHITTAKER 6644 ppm
 DETRONICS 6607 ppm

15 MINUTE CONCENTRATION VALUES:

SMC 14A ppm WHITTAKER 6672 ppm
 DETRONICS 6607 ppm

TEST PERFORMER [Signature] 5/21/97

TEST DIRECTOR [Signature] 5/21/97

Issd

Date

Test 2.7
Using Detronics and Whitaker Cell at 200 SCF#8

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

PGI FLOW TEST DATA SHEET

TEST ID No. 2-8 DATA FILE No. GC052172-S DLK5172-SSMC ID No. N/A WHITTAKER ID No. 441229BETRONICS ID No. H1147

MAIN PUCT FLOW PARAMETERS:

REQUIRED FLOW 200 CFMCALCULATED FLOW 197 CFMDIFF. PRESS. 3.742 H₂O ABS. PRESS. 14.45 PSIATEMP. 71 °FDUCT LENGTH 13 FT.

FLOW VELOCITY _____ FT/SEC

TRANSPORT TIME _____ SEC.

Note: GC malfunction (see log entry page 140)

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 6200 ppmMEASURED H₂ CON. 4096 ppmCALCULATED H₂ CON. 6431 ppmDIFF. PRESS. 2.958 H₂O ABS. PRESS. 14.5 PSIATEMP. 72.4 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC N/A ppmWHITTAKER 6092 ppmBETRONICS 6603 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppmWHITTAKER 6620 ppmBETRONICS 6607 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppmWHITTAKER 6611 ppmBETRONICS 6607 ppmTEST PERFORMER [Signature]

Date

TEST DIRECTOR [Signature]

Date

Test 2-5
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 2-9 DATA FILE No. GC 052272-9 BL 052272-9
 SMC ID. No. N/A WHITTAKER ID No. H51229
 DETRONICS ID No. H1147

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 300 CFM CALCULATED FLOW 199 CFM
 DIFF. PRESS. 3.78 "H₂O ABS. PRESS. 14.46 PSIA TEMP. 70.7 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ F/SEC
 TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 6000 ppm MEASURED H₂ CON. 6446 ppm CALCULATED H₂ CON. 6346 ppm
 DIFF. PRESS. 7.954 "H₂O ABS. PRESS. 14.50 PSIA TEMP. 72.4 °F

SENSOR CONCENTRATION OUTPUT:

3 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 6958 ppm
 DETRONICS 6603 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 6468 ppm
 DETRONICS 6607 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 6466 ppm
 DETRONICS 6607 ppm

TEST PERFORMER [Signature] 5/22/97 Date

TEST DIRECTOR [Signature] 5/22/97 Date

Test 2-9
Using Detronics and Whittaker Cell at 200 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 3-1 DATA FILE No. CC052377-1 BL 852573-1
 SMC ID No. N/A WHITTAKER ID No. 411229
 DETRONICS ID No. 41147

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 180 CFM CALCULATED FLOW 180.6 CFM
 DIFF. PRESS. 3.415 "H₂O ABS. PRESS. 14.46 PSIA TEMP. 69.9 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
 TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 200 ppm MEASURED H₂ CON. 215 ppm CALCULATED H₂ CON. 204 ppm
 DIFF. PRESS. 0.817 "H₂O ABS. PRESS. 14.94 PSIA TEMP. 71 °F

SENSOR CONCENTRATION OUTPUT:

1 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 213.6 ppm
 DETRONICS 197.9 ppm

14 MINUTE 10 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 267 ppm
 DETRONICS 197.9 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 268 ppm
 DETRONICS 197.9 ppm

TEST PERFORMER [Signature] Date 5/23/97

TEST DIRECTOR [Signature] Date 5/23/97

Test 3-1
Using Detronics and Whittaker Cell at 180 SCF%

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID No. 3-2 DATA FILE No. GC092373-2 DL 852373-2
 SMC ID No. N/A WHITTAKER ID No. H91229
 DETRONICS ID No. H1149

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 190 CPM CALCULATED FLOW 190 CPM
 DIFF. PRESS. 3.42 "H₂O ABS. PRESS. 14.44 PSIA TEMP. 72.4 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
 TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 2000 ppm MEASURED H₂ CON. 2060 ppm CALCULATED H₂ CON. 1994 ppm
 DIFF. PRESS. 0.83 "H₂O ABS. PRESS. 14.37 PSIA TEMP. 72.7 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 1828 ppm
 DETRONICS 2002 ppm

14 MINUTE TO 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 1975 ppm
 DETRONICS 2100 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 1971 ppm
 DETRONICS 2100 ppm

TEST PERFORMER [Signature]

Date

TEST DIRECTOR [Signature]

Date

Test 3-2
Using Detronics and Whittaker Cell at 180 SCF%

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FCI FLOW TEST DATA SHEET

TEST ID. No. 3-3 DATA FILE No. GC 092373-3 DL 092373-3
 SMC ID. No. N/A WHITTAKER ID No. 491229
 BETHONICS ID No. 4447

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 180 CPM CALCULATED FLOW 180 CPM
 DIFF. PRESS. 3.412 "H₂O ABS. PRESS. 14.44 PSIA TEMP. 70.8 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ F/SEC
 TRANSPORT TIME _____ SEC.

INJECTION FLOW PARAMETERS:

DESIGNED H₂ CONCENTRATION 4000 ppm MEASURED H₂ CON. 4277 ppm CALCULATED H₂ CON. 4168 ppm
 DIFF. PRESS. 1.742 "H₂O ABS. PRESS. 14.41 PSIA TEMP. 71.6 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 3843 ppm
 BETHONICS 4303 ppm

14 MINUTE 30 SECOND CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 4126 ppm
 BETHONICS 4504 ppm

15 MINUTE CONCENTRATION VALUES:

SMC N/A ppm WHITTAKER 4122 ppm
 BETHONICS 4504 ppm

TEST PERFORMER [Signature] 9/25/97

Date

TEST DIRECTOR [Signature] 9/23/97

Date

Test 3-3
Using Detronics and Whittaker Cell at 100 SCFM

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

FGI FLOW TEST DATA SHEET

TEST ID. No. 3-4 DATA FILE No. GC 052373-4 BL 052373-4
 SAIC ID. No. N/A WHITTAKER ID No. H51229
 DETRONICS ID No. 41147

MAIN DUCT FLOW PARAMETERS:

REQUIRED FLOW 180 CFM CALCULATED FLOW 180 CFM
 DIFF. PRESS. 3.42 H₂O ABS. PRESS. 14.44 PSIA TEMP. 71.3 °F
 DUCT LENGTH 13 FT. FLOW VELOCITY _____ FT/SEC
 TRANSPORT TIME _____ SEC

EMISSION FLOW PARAMETERS:

DESIRED H₂ CONCENTRATION 600 ppm MEASURED H₂ CON. 607 ppm CALCULATED H₂ CON. 650 ppm
 DIFF. PRESS. 3.72 H₂O ABS. PRESS. 14.47 PSIA TEMP. 72.1 °F

SENSOR CONCENTRATION OUTPUT:

2 MINUTE CONCENTRATION VALUES:

SAIC N/A ppm WHITTAKER 5964.5 ppm
 DETRONICS 6405 ppm

14 MINUTE 10 SECOND CONCENTRATION VALUES:

SAIC N/A ppm WHITTAKER 6397 ppm
 DETRONICS 6567 ppm

15 MINUTE CONCENTRATION VALUES:

SAIC N/A ppm WHITTAKER 6443 ppm
 DETRONICS 6607 ppm

TEST PERFORMER [Signature]

5/23/77

Date

TEST DIRECTOR [Signature]

5/23/77

Date

Test 3-4
Using Detronics and Whittaker Cell at 100 SCFM

APPENDIX D - EXCEPTION RECORDS

FLAMMABLE GAS SENSORS AND SPOOLPIECE FLOW RESPONSE TEST PLAN AND PROCEDURE

TEST EXCEPTION SHEET

TE-6

EXCEPTIONS			CORRECTION APPROVAL		
Procedure Step Number	Date	Description	Initials/Date		
			Test Engineer	Test Director	Witnesses
	7/19/97	Lowest Pressure Transducer (PT2), S.N. 0266492 Calibration expired 5/10/97. Unit identified unit, P/N # 750-80-02-026 until it expired on 5/10/97. Cal lab equipment broken with no projection on repair date. Must use other operational unit as secondary source and port cal this unit when possible. Secondary source - Cal # 750-80-02-026. Results of Secondary Cal: Unit OK within ± 1.02 PSI which is within ± 1.07 PSI spec.	<i>[Signature]</i>	<i>[Signature]</i>	

TEST APPROVED WITH EXCEPTIONS

EXCEPTION RESOLVED

Test Director

Date

FGL Cognizant Engineer

Date

APPENDIX E - TEST LOG RECORDS

6/12/66

[illegible][illegible]

36/4-7

05/05/99

5th yr. of Limited Home for Hydrogen concentration. 2/2/22.
This is done prior to running test cell. (Per Test Plan Appendix F-5)

4/17/17 Selling PPR to 7000 @ 20% & 40%

$$H_{\text{max}} = 3.22 \text{ m H}_2\text{O}$$

Dist. Diff. Pass. (in H₂O) = 3.81 in H₂O

14. $\Delta_{\text{Hess}} = 14.92 \text{ PSIA}$

but the Humidity Temp. 105 $\frac{1}{2}$ 70.3

Est. Temp. = 72°F

with	Chlorinated PPS	= 6900
------	-----------------	--------

Actual PPM (drying bulb) = 6279

2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211st, 212nd, 213th, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 300th, 301st, 302nd, 303rd, 304th, 305th, 306th, 307th, 308th, 309th, 310th, 311st, 312nd, 313th, 314th, 315th, 316th, 317th, 318th, 319th, 320th, 321st, 322nd, 323rd, 324th, 325th, 326th, 327th, 328th, 329th, 330th, 331st, 332nd, 333rd, 334th, 335th, 336th, 337th, 338th, 339th, 340th, 341st, 342nd, 343rd, 344th, 345th, 346th, 347th, 348th, 349th, 350th, 351st, 352nd, 353rd, 354th, 355th, 356th, 357th, 358th, 359th, 360th, 361st, 362nd, 363rd, 364th, 365th, 366th, 367th, 368th, 369th, 370th, 371st, 372nd, 373rd, 374th, 375th, 376th, 377th, 378th, 379th, 380th, 381st, 382nd, 383rd, 384th, 385th, 386th, 387th, 388th, 389th, 390th, 391st, 392nd, 393rd, 394th, 395th, 396th, 397th, 398th, 399th, 400th, 401st, 402nd, 403rd, 404th, 405th, 406th, 407th, 408th, 409th, 410th, 411st, 412nd, 413th, 414th, 415th, 416th, 417th, 418th, 419th, 420th, 421st, 422nd, 423rd, 424th, 425th, 426th, 427th, 428th, 429th, 430th, 431st, 432nd, 433rd, 434th, 435th, 436th, 437th, 438th, 439th, 440th, 441st, 442nd, 443rd, 444th, 445th, 446th, 447th, 448th, 449th, 450th, 451st, 452nd, 453rd, 454th, 455th, 456th, 457th, 458th, 459th, 460th, 461st, 462nd, 463rd, 464th, 465th, 466th, 467th, 468th, 469th, 470th, 471st, 472nd, 473rd, 474th, 475th, 476th, 477th, 478th, 479th, 480th, 481st, 482nd, 483rd, 484th, 485th, 486th, 487th, 488th, 489th, 490th, 491st, 492nd, 493rd, 494th, 495th, 496th, 497th, 498th, 499th, 500th, 501st, 502nd, 503rd, 504th, 505th, 506th, 507th, 508th, 509th, 510th, 511st, 512nd, 513th, 514th, 515th, 516th, 517th, 518th, 519th, 520th, 521st, 522nd, 523rd, 524th, 525th, 526th, 527th, 528th, 529th, 530th, 531st, 532nd, 533rd, 534th, 535th, 536th, 537th, 538th, 539th, 540th, 541st, 542nd, 543rd, 544th, 545th, 546th, 547th, 548th, 549th, 550th, 551st, 552nd, 553rd, 554th, 555th, 556th, 557th, 558th, 559th, 560th, 561st, 562nd, 563rd, 564th, 565th, 566th, 567th, 568th, 569th, 570th, 571st, 572nd, 573rd, 574th, 575th, 576th, 577th, 578th, 579th, 580th, 581st, 582nd, 583rd, 584th, 585th, 586th, 587th, 588th, 589th, 590th, 591st, 592nd, 593rd, 594th, 595th, 596th, 597th, 598th, 599th, 600th, 601st, 602nd, 603rd, 604th, 605th, 606th, 607th, 608th, 609th, 610th, 611st, 612nd, 613th, 614th, 615th, 616th, 617th, 618th, 619th, 620th, 621st, 622nd, 623rd, 624th, 625th, 626th, 627th, 628th, 629th, 630th, 631st, 632nd, 633rd, 634th, 635th, 636th, 637th, 638th, 639th, 640th, 641st, 642nd, 643rd, 644th, 645th, 646th, 647th, 648th, 649th, 650th, 651st, 652nd, 653rd, 654th, 655th, 656th, 657th, 658th, 659th, 660th, 661st, 662nd, 663rd, 664th, 665th, 666th, 667th, 668th, 669th, 670th, 671st, 672nd, 673rd, 674th, 675th, 676th, 677th, 678th, 679th, 680th, 681st, 682nd, 683rd, 684th, 685th, 686th, 687th, 688th, 689th, 690th, 691st, 692nd, 693rd, 694th, 695th, 696th, 697th, 698th, 699th, 700th, 701st,

date 20 Per = 100%

Time 10 min. 40 sec.

5.000, PPM to 4000 P 200 5.15 m

+ water
 D.R.S. H₂ Transit = 191

H_2 Avg Plays = 14.4

Dist. Dr. Rec. - 3.79

Dist. along River = 14.47

H_2 resist Temp. $P = 74.9^\circ$

Out Temp 74

Calculated PPM = 4082

Fire Tests completed: 2-1 - 2500 ppm

2-4-1960

2-7 1980

7000

209 2000 "

but less complete, a 200 ppm test to confirm that mercury has withdrawn
led to a vertical mounting and rotating the internal spargers/bottle did
not improve, affect the response of the sensors (also a whitefish).
To have point (a) 2000 through 2000 ppm, the sensors have shown good
response with less changes. All tests have resulted with 70% of total

John H. Brown

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Field Date
5/5/97

5

Completed Test 1-1 SMC-67.3 @ 13 mm, whistley = 163.3 @ 13 mm
66.3 2.10 PM

Field Date
5/6/97

Run Tests 1-2 & 1-3

Notes: During Test 1-2, noticed 3 positive going spikes on SMC instrument. Not sure of cause. Perhaps unit not sufficiently warmed up prior to test since it was on the shelf about 30 minutes prior. Test 1-3 did not have any unusual spikes... no wiring problems found.

Run Test 2-6 To complete suite at 4th @ 200 SFM test time

Will run a series of Tests @ 150 SFM for comparison. One test at 200, 1 @ 2000-3000, 1 @ 4-5,000 & 1 @ 6-10,000 PPM. Will use following identifications

3-1 → 200 PPM @ 150 SFM

3-2 2000 PPM " " "

3-3 4000 PPM " " "

3-4 6000 PPM " " "

— Det

None

— P

None

None

None

None

None

None

Recalibrated SMC & refilled oil on whistley cell for use at the 150 SFM flow rate. Used 10,000 PPM Cal gas for calibration. Run tests 3-2 & 3-3 (2000 & 4000 PPM @ 150 SFM)

Field Date
5/11/97

Run Test 3-4. Did not run 3-1 since this test was not needed for functional comparison testing. It was originally needed to verify proper operation of gas injection system at low flow rate (for safety reasons primarily)

Absolute exposure Transmitter Parameter 9-30 PPM - Cal Code 395-30-01-556 had expired calibration on 5/6/97. Replaced it with an identical unit, Cal Code 395-30-01-556, which expires on 5/6/97. This gave a little extra time to complete this first phase of testing.

— P

None

None

None

None

None

None

None

None

137

5-12-97

5-12-97 S.M. Spink

3 min

Install Det-Tronics hydrogen sensor S/N 726175 into signal condition.

16/97

Det-Tronics model 487,000 S/N H.11877 Apply Teflon tape on sensor, NPT threads to seal to, suitable condition body.

1 min

Installed on 5-12-97. Cleaned NPT threads on new gas sensor body to increase thread engagement. Add 1/4" spacer plate behind signal condition to gas chamber for gas sensor body and Det-Tronics. Apply Grease on main condition cover threads for O-ring seals (the spacer O-rings should not be located, as O-ring is damaged).

Flow

Test

2 min

5/14/97

J. Spink

Det-Tronics sensor and mounting hardware installed in propane assembly. Damage to wiring checked and initial post testing all successful.

3/13/97

use
dist on

Running Flow Tests on Det-Tronics sensor. These tests involve injecting a high grade calibration gas (9,000 PPM) into the sensor chamber at a fixed flow rate. This initial flow rate (ca. 500 cc/min) will set the calibration on the sensor. Then, successively, increased flow rates will be applied to see if the indicated value changes. The following, assumed, flow rates will be used.

5 min

7/27

1 min

OL set at (583 cc/min)
 125 " (3990 ")
 225 " (7079 ")
 375 " (10,617 ")
 5 " (14,188 ")

All using 10,000 PPM
 the gas of remainder are
 (Notch Calibration # 1,52277
 Cal # 7-034-200)

5/20/97

Results:

Flow rate (cc/min)

8.000 PPM

5 min

10,000 PPM Gas
 500 cc/min (9177 scfm)
 1000 cc/min (1835 scfm)
 1500 cc/min (2753 scfm)
 2000 cc/min (3670 scfm)
 2500 cc/min (4588 scfm)
 3000 cc/min (5506 scfm)

8.000 PPM
 10,000
 10,420
 11,208
 11,608
 11,812

1 min
 10,222
 10,622
 11,022
 11,422
 11,822
 12,222

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John Smith
4/1/95

CONT: The sensor would take increasing longer periods to recover after a surge and generally would not surge out below 202 ppm in some at the last sample surge.

Time

3:55

Date

3/31

City

State

Country

Notes

1.

- Will repeat yesterday's flow check except that the sensor will be recalibrated at the highest flow rate, 5 SCFM, instead of the low flow rate 200 cfm.

Results:	Flow Rate	measured output	1 min 30 sec	2 min	3 min	4 min
2 SCFM	14,159 cfm	98.19	98.19	98.19	98.19	98.19
3.75 "	10,619 "	98.19	98.19	98.19	98.19	98.19
12.5 "	7,879 "	98.19	98.19	98.19	98.19	98.19
12.5 "	5,840 "	98.19	98.19	98.19	98.19	98.19
20.0 "	1,000 "	98.19	98.19	98.19	98.19	98.19
31.76 "	500 "	98.19	98.19	98.19	98.19	98.19
20.0 "	250 "	98.19	98.19	98.19	98.19	98.19

Grade

Base

Top

Note that the sensor had a higher than zero start point. Also note that the unit was calibrated such that 10,000 ppm corresponds to 50% of its full range (90% LEL). This allowed values of over 10,000 ppm to be taken without the unit going into fault mode. It will be this of the sensor gas works for LEL. Normal operation & testing at 90% corresponding to 10,000 ppm used (10,000 ppm of acetylene).

100%

to

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

- 4th during which that a test of the function of 10,000 ppm oil gas corresponds to 90% LEL.

- Detcon setup such that 10 ppm gas corresponds to 4 ms (1/4 mass range) and 900 ppm gas corresponds to 25 ms (1/4 mass range). This sets the unit up such that the max output at 900 ppm will correspond to 10,000 ppm. This is how the EMC was set up.

- DETCONICS MODEL 42700, SN H1147 used in this testing.

- Whittaker Cell SN H51229 used. Calibrated today using 10,000 ppm hole grade oil gas (subject matter cell).

0 ppm = 0.283 mV

10,000 ppm = 1.650 mV

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Since the Rosemount Pressure Transmitter, S&W
769-80-02-006 used for absolute pressure measurement
was 4/10/97 - and the Venturk Standards Lab cannot provide
calibration on it in the foreseeable future - a secondary
calibration was done here in the 805. The secondary calibration
sensor was an identical absolute pressure transmitter - Rosemount
2700-02-02-006-003, Figures 2-3-73. Pressure
lines were checked to each unit and pressures were applied
as follows:

Rosemount Absolute Pressure Secondary Calibration

1. reading 800 PPM at 905	Secondary sensor (SN 003)	Unit being checked (SN 006)
	Indicated	
	14.32	14.36
	10.92	10.93
	16.94	16.95
	17.32	17.33
	18.92	18.88
	19.99	19.99
	21.14	21.16
note that each unit		
be seen change responding	At 1 atm or more, the variance was within 1/2 0.2 PSI This is within the manufacturers 1/2 0.3 psi spec.	

comprised - 100 Calibration (SN 00197001) gave following values compared against
a 810 PPM 40 Calibration gas:

1000 (max) 1000	1012.17
200	1012.71
expand	1012.96
	1013.77

Testing - Tests 001972-1 & 001972-2 (5000 PPM max) (run 10000
each response time on both sensors & within 1.000 ppm at each
500 PPM

NOTE: Don't type on dialing out, telling negative pressure exp. will which
is introducing error into calibration. PPM sensor actual PPM (by 1000
2000 ppm max). Checked some between unit flow element & 10000
and 10000 not looks accurate to about - 2" H₂O. should correct

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- Run 052072 Cal. on GC - Results using 1000 PPM H_2 gas:

Run 1 Run 2 Run 3
1009.28 ; 1009.92 ; 1009.03

- Run Tests 052072-3, 052072-4, 052072-5 & 052072-6 today

- Completed Tests 052072-7 & 052072-9

- Note that the GC just gave low PPM results on runs 1-3. This compares to the calculated amount (using injection gas pressure, etc.) and the Delconics & Whittaker sensors. Will troubleshoot problem

- Recalibrated GC & checked sample line connections after running Test 052072-8 (repeat of Jeffery's 2-9). GC still gave low PPM values. Further inspection revealed the sample inlet tube had kinked some and allowed air to seep into the line (from outside the shed). Repositioned and secured the sample line.

- Test 052072-9 gave good results on GC:

H_2 (molar) = 6446

Delconics (molar) = 6607

Whittaker (molar) = 6466

Note: Tests 2-7 & 2-8 will not be repeated even though the GC gave good results. This is because the GC previously provided a reference for safety, oxygen, moisture, etc. The main goal of the testing is to show response of the H_2 sensors and the tests 2-7 & 2-8 still fulfilled this goal.

- Completed Tests 1-1, 1-2, & 1-3, 2-10 PPM - Delconics at 1000 PPM H_2 concentration

Mo. Catling

- Recalibrated
GC
at 1000
PPM

Test
180.31

- Test

24

25

26

27

28

29

30

- Test

31

32

- Tests

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2/23/97
- Recalibrated Distance Sensor (Serial #41127) to provide a 20 ppm output at 1900 ppm using a dust flow rate of 180 SCFM (instead of 200 SCFM). The cal gas used was 2070 ppm which corresponded to 2.1% (at nominal) at the output.

The following testing will involve running with a dust flow of 180 SCFM instead of 200 SCFM.

- Test 3-1 (180 SCFM, 200 PPM) completed.

Note that the distance sensor was able to see this low concentration (200 PPM) of H_2 . This may be due to the change in sensitivity at the sensor after recalibration at 180 SCFM dust flow (1000 ppm (100 ppm) through the sensor compared to 500 ppm at 200 SCFM dust flow), or since this was the first run of the day and the sensor had not had any high concentrations of H_2 through it for over 12 hours. It may be able to see a lower concentration better.

Note that whatever full output calibration was done after this test, thus, response time at this test (3-1) may not be correct.

- Test 3-2 (180 SCFM x 2000 PPM) completed.

Note that recalibration at both sensors is critical if a change in dust flow (from 180 to 200 SCFM) is made.

- Tests 3-3 & 3-4 completed (180 SCFM x 2000 & 2070 PPM)

APPENDIX F - DETRONICS FLAMMABLE GAS SENSOR STARTUP AND
CALIBRATION PROCEDURE

15. Tighten the two screws.
16. Place the cover back on the transmitter enclosure.

NOTE

The wiring procedures in this manual are intended to ensure proper functioning of the device under normal conditions. However, because of the many variations in wiring codes and regulations, total compliance to these ordinances cannot be guaranteed. Be certain that all wiring complies with applicable regulations that relate to the installation of electrical equipment in a hazardous area. If in doubt, consult a qualified official before wiring the system.

The installation must be made in accordance with the NEC.

INSTALLATION CHECKLIST

The following checklist is provided as a means of double checking the system to be sure that all phases of system installation are complete and have been performed correctly.

1. Enclosure is securely mounted and sensor is pointing down.
2. Conduit seals have been installed at all junction box entries (if conduit is being used).
3. Power wiring is installed and power source is operational.
4. Wiring to external loads and/or monitoring devices is properly connected.
5. If a sensor separation kit is used, interconnecting wiring is correct.
6. All cable shields are properly grounded.
7. Device is programmed as desired. Record this information for future reference.
8. Optional sensor accessories (quartz/splash guards, sample draw devices, etc.) are installed, clean, and in good condition.
9. Plug-in electronic module is properly installed.
10. Cover is tightly installed.
11. Response equipment is operational.

Proceed to System Startup and Calibration.

TYPICAL SYSTEM APPLICATION

Figures 9 and 10 illustrate typical systems and are intended to serve as examples only. For assistance in adapting a system to your individual requirements, contact the Field Support Group at Detector Electronics.

Section III

System Startup

STARTUP PROCEDURE

1. Output loads that are normally actuated by the gas detection system should be secured (remove power from all output devices) to prevent undesired activation.
2. Be sure that all external wiring has been installed properly and that the sensor has been connected properly. Also be sure that the electronic module has been properly plugged into the connector inside the enclosure.
3. Apply power to the system.

NOTE

The LB700H has been designed to "wait" for approximately 45 seconds before beginning normal operation when power is applied to the system. During this time the outputs are inhibited, the FAULT LED is illuminated, and the current output indicates a fault condition. This delay allows time for the sensor output to stabilize before normal operation is begun.

4. Check for correct setting of the alarm setpoints and calibration gas concentration (see "Setpoint Adjustment" section of this manual).

NOTE

Upon power-up of the system, initialization tests are automatically performed to ensure proper operation of the microprocessor and operating program. If a problem is detected, the FAULT LED flashes and "F8" is displayed on the digital display. Some types of initialization failures can be corrected by momentarily pressing the TEST (MODE SELECT) button on the side of the controller. If the "F8" fault persists, the controller must be returned to the factory for repair. If the problem is corrected, normal system operation is restored. However, resetting the LB700H while a "F8" fault is occurring causes a loss of all field

programmed information (controller reverts to factory default values where applicable). A complete reprogramming and recalibration **MUST** be performed to ensure proper operation.

5. Perform the calibration procedure.
6. Remove mechanical blocking devices (if used) and restore power to the output leads.

SETPOINT ADJUSTMENT

The alarm setpoints are adjustable from 5 to 40% LFL for the low alarm and from 10 to 60% LFL for the high alarm. The calibration gas concentration is adjustable from 30 to 99% LFL. To check the setpoint levels, use the "Setpoint Display Mode" described below. To change the setpoint or calibration gas values, use the "Setpoint Adjustment Procedure."

SETPOINT DISPLAY MODE

1. To enter the Setpoint Display mode, press and hold the MODE SELECT button until the LOW LED begins to blink (approximately 1.5 seconds). Release the MODE SELECT button. The low setpoint will be shown for two seconds on the digital display.

NOTE

The MODE SELECT button should be released as soon as the transmitter has entered the Setpoint Display mode (after 1.5 seconds). If the button is still depressed at the end of the Setpoint Display mode (7.5 seconds), the transmitter will automatically enter the Calibrate mode. If the operator is not prepared to perform a calibration, a calibration fault will occur (after 10 minutes).

2. At the end of the two-second interval, the LOW LED goes out, the HIGH LED begins to blink, and the digital display shows the high setpoint.
3. Two seconds later the HIGH LED goes out and the CAL LED blinks. The digital display now shows the programmed calibration gas concentration.
4. After displaying the calibration gas concentration for two seconds, the transmitter automatically leaves the Setpoint Display mode and returns to the Normal operating mode.
5. If adjustments to the setpoints are required, perform the Setpoint Adjustment procedure. When the setpoint levels are acceptable, recurt this

information for future reference and begin the Calibration procedure.

SETPOINT ADJUSTMENT PROCEDURE

1. Determine the required alarm setpoint levels and calibration gas concentration. If the system will be used to detect a gas other than the type being used for calibration, a conversion ("K") factor must be used to determine the desired value to be programmed into the microprocessor in step 5 below. Refer to the "Calibration" section of this manual for details.

2. Remove the cover from the transmitter housing.

CAUTION

The area must be declassified when the cover is removed with power applied.

3. Momentarily depress either of the two SETPOINT buttons. The % LFL display indicates the low setpoint and the LOW LED blinks. Press the appropriate SETPOINT button to either increase or decrease the low setpoint level.
4. When no changes to the setpoint level have been made for 5 seconds, the LOW LED goes out, the HIGH LED blinks, and the digital display shows the high setpoint. Press the appropriate SETPOINT button to obtain the desired reading on the digital display.
5. When no changes have been made for 5 seconds, the HIGH LED goes out, the CAL LED blinks, and the % LFL display indicates the calibration gas concentration. Press the appropriate SETPOINT button to change the calibration gas concentration as required.
6. When no changes have been made for 5 seconds, the system automatically returns to the Normal operating mode.
7. Place the cover back on the housing.
8. Record the new setpoint levels for future reference.

NOTE

The alarm setpoints, calibration gas concentration, and calibration data are stored in non-volatile memory and are retained in the event of a power loss. However, if power is interrupted while performing the Setpoint Adjustment or Calibration procedure, the entire procedure must be repeated when power is restored.

CALIBRATION

Various factors affect the time interval between periodic calibrations (typically 30, 60, or 90 day intervals, depending on the conditions). Since each application is different, the length of time between regularly scheduled calibrations can vary from one installation to the next. In general, the more frequently a system is checked, the greater the reliability. The detector **must** be calibrated.

- Before a new system is initially put into service
- If the sensor is replaced
- If the plug-in electronic module is replaced
- If the sensor is exposed to a high level of combustible gas.

CAUTION

Exposure to a high level of gas can have an adverse effect on the sensitivity of the sensing element. If the level of gas at the sensor should reach 100% LFL, it is important that it be tested and recalibrated if required. In some cases, it may be necessary to replace the sensor.

If an over-range condition should occur, the digital display flashes "99" and blinks on until reset. The user must exercise caution if an over-range reading is indicated, since a highly explosive condition could exist. The hazardous area should be checked with a portable detector instrument to determine the actual level of combustible gas present.

For best calibration results, allow a new sensor to operate for several hours to ensure a stable output before performing calibration. For the highest degree of accuracy, perform a second calibration after 24 hours.

When a sensor is exposed to a different or new environment, calibration should be checked frequently to determine the proper interval between calibrations.

NOTE

Under ideal conditions, some systems can go for extended periods of time without a serious loss of sensitivity. However, it must be noted that only during calibration can the system be tested to assure total function. Loss of sensitivity can be caused by various factors. One common cause is by plugging of the sintered metal filter by water, dirt, oil, paint, etc. Problems of this nature are capable of totally incapacitating the sensor, but it is only during calibration that the

problem will be discovered. To assure the greatest level of reliability, calibration should be performed at regularly scheduled intervals.

Before performing calibration, the operator should also examine the sintered metal filter of the sensor (flame arrester) to be sure that it is not missing or damaged. If the filter is defective or missing, the sensor must not be operated, since the exposed sensing element can act as an ignition source. It should also be noted that a dirty cover can significantly reduce the sensitivity of the sensor.

NOTE

The use of a Det-Tronics calibration kit is recommended to ensure accurate calibration.

CALIBRATION FACTOR²

The sensitivity of the sensor to different types of gases can vary considerably. To assure accuracy, it is recommended that calibration be performed using a gas/air mixture of the gas that is intended to be detected. If several different combustible gases can be present, calibrate to the least detectable gas.

If a calibration mixture of the gas to be detected is not available, the system can be calibrated using a standard calibration gas and an appropriate "K" factor. The "K" factor is used to calculate the calibration gas setting that is entered into the microprocessor in place of the standard calibration gas % LFL concentration (typically 50% LFL). The "K" factor represents the relationship between the gas to be detected and the gas type to be used for calibration. A "K" factor value of "1" is optimum.

To calculate the calibration gas setting that will be programmed into the microprocessor, use the following formula:

$$S = C \times K$$

S = Calibration gas setting

C = LFL percentage of gas being used

K = Calibration factor

For example, assume that 50% LFL methane will be used for calibrating a system that will detect a gas with a "K" factor of 1.2. Using the above formula, 50% (C) is multiplied by 1.2 (K) to arrive at a calibration gas setting of 60% (S). The value "60" must then be entered when programming the U8700H for the calibration gas.

² Calibration factors are not verified by FMHC.

IMPORTANT

Accurate calibration depends on the use of the correct *K* factor. The process of determining the correct *K* factor involves considering the type and LFL percentage of the calibration gas being used, as well as the type of gas to be detected. In addition, since *K* factors can vary from one sensor model to the next, the type of sensor must also be considered. Contact Detector Electronics to determine or verify the correct *K* factor to be used. If a *K* factor for a specific compound is not available, a *K* factor can be established using a sample of the material to be detected. Contact the factory for details.

Calibrate the system using the following procedure.

CALIBRATION PROCEDURE

1. Be certain that the transmitter is correctly programmed for the LFL percentage of the gaseous mixture being used for calibration. (See "Setpoint Adjustment" section.) Reprogram the transmitter if required. Failure to do so will greatly impair system response.

NOTE

If a dust cover or splash shield is used, it should be checked to ensure that it is not dirty or plugged. A plugged dust cover can restrict the flow of gas to the sensing element, seriously reducing its effectiveness. For optimum performance, sensor covers/filters should be replaced at each calibration to ensure that they have not been degraded or plugged.

2. Be sure that only clean air (0% LFL) is present at the sensor. (The microprocessor begins taking Zero readings immediately upon entering the Calibrate mode.) If the possibility of background gases exists, purge the sensor with clean air to assure accurate calibration.

NOTE

The practice of placing your hand over the sensor during the zero portion of the calibration procedure is not recommended.

3. Depress and hold the MODE SELECT button until the CAL LED is illuminated and the % LFL display starts to blink (approximately 7.5 seconds).
4. When the Zero calculations are complete (30 seconds minimum), the % LFL display stops blinking and reads "0.0".
5. Apply the calibration gas. The digital display starts to blink, and the value indicated on the %

LFL display rises. (Be sure that the pressure gauge on the calibration gas bottle indicates that there is enough gas in the tank to complete the calibration.)

6. When the microprocessor has completed the Span adjustments (30 seconds minimum), the % LFL display stops blinking. The LFL percentage of the calibration gas is shown on the display.
7. Remove the calibration gas. When the gas level falls to 0% LFL below the lowest alarm setpoint, the transmitter automatically exits the Calibrate mode. All outputs and indicators return to normal operation.

If the operator fails to complete the calibration procedure or if the sensitivity of the sensor has deteriorated to the extent that calibration cannot be successfully completed, a calibration fault ("F2" status) will be generated and the transmitter will automatically revert back to the former calibration settings (after 10 minutes). If a successful calibration cannot be accomplished, replace the sensor and recalibrate.

When the sensing element is approaching the end of its useful life, an "F1" status (end of life) is displayed during the Calibrate mode. This does not indicate a system malfunction, but is intended simply to make the operator aware of this condition. A successful calibration can still be performed. The "F1" is flashed on the % LFL display for one out of every five seconds during the time that the calibration gas is removed and the gas level indicated on the digital display returns to zero. The "F1" is no longer displayed after the system leaves the Calibrate mode.

Controllers or other equipment used in conjunction with the U8700 should be calibrated following the manufacturer's recommendations.

CURRENT OUTPUT CALIBRATION

The 4 to 20 ma output is calibrated at the factory to provide a degree of accuracy that is satisfactory for most applications. However, the highest level of accuracy can be obtained by performing the following procedure.

1. A dc current meter capable of measuring 4 to 20 ma must be connected to the current loop output. This can be accomplished by connecting a dc ammeter in series with the load or by connecting a digital dc voltmeter across a known load resistance and calculating the current flow using the formula:

$$I = \text{voltage}/\text{load resistance}$$

- Remove the cover from the transmitter housing.

CAUTION

The area must be de-classified when the cover is removed with power applied.

- Depress and hold either SETPOINT button, then momentarily press the MODE SELECT button. Release both buttons. The LOW LED should flash slowly and the % LFL display will indicate a reference number between 1 and 99. This number is a reference only and can be ignored by the operator, however, the flashing LOW LED indicates that the system is now generating a 4 ma output.
- Press the appropriate SETPOINT button to obtain a 4 ma reading on the meter.
- When no adjustments have been made for 5 seconds, the transmitter automatically switches to a 20 ma output. This is indicated by a flashing HIGH LED. Press the appropriate SETPOINT button to obtain a 20 ma reading.
- When no changes have been made for 5 seconds, the system automatically returns to the Normal operating mode and saves the data in non-volatile memory.
- Place the cover back on the housing.
- Remove the meter from the system output.

CHECKOUT IN NORMAL MODE

The system should be checked periodically in the Normal mode to ensure that those items not checked by the diagnostic circuitry are functioning properly.

CAUTION

Be sure to secure all output devices that are activated by the system to prevent unwanted activation of this equipment, and remember to place these same output devices back into service when the checkout is complete.

A rubber O-ring is used to ensure that the enclosure cover will seat tightly and provide protection against water ingress. Periodically the enclosure should be opened and the O-ring should be inspected for cracks, nicks, and dryness. To test the ring, remove it from the enclosure and stretch it slightly. If cracks are visible, it should be replaced. If it feels dry, a thin coating of lubricant should be applied. When re-installing the ring, be sure that it is properly seated in the groove on the housing. (Do not install the O-ring in the thread relief groove, which is located above the O-ring groove.) It is imperative that this O-ring be properly installed and in good condition. Failure to properly maintain it can allow water to enter the enclosure and cause premature failure. A coating of lubricant should also be applied to the threads on the cover before re-assembling the enclosure. This will both lubricate the threads and help to prevent moisture from entering the enclosure.

CAUTION

The O-ring should be lubricated with the same silicone free polysiloxane grease that is recommended for lubricating the sensor threads. (Refer to the "Ordering Information" section of this manual for part number.) The use of other lubricants is not recommended, since some materials can adversely affect the performance of the catalytic sensing element. Under no circumstances should a lubricant or compound containing silicone be used.

A test form is supplied in this manual for recording maintenance performed on the system.

Section IV System Maintenance

ROUTINE MAINTENANCE

The gas detection system requires virtually no routine maintenance, except for periodic checks to assure proper system function and calibration. The frequency of these checks is determined by the requirements of the particular installation.

MANUAL CHECK OF OUTPUT DEVICES

Fault circuitry in the LB700H continuously monitors for an open sensing element, excessive negative zero drift, open or shorted sensor wiring, and various other problems that could prevent proper response to a dangerous level of gas. It does not, however, monitor external equipment that is activated by the outputs. It is important that these devices be checked initially when the system is installed, as well as periodically during the ongoing maintenance program.

TROUBLESHOOTING

Table 4 is intended to serve as an aid in locating the cause of a system malfunction.

NOTE

Record all faults on the Fault Record Sheet supplied with this manual.

APPENDIX G - DATA ACQUISITION SYSTEM SPREADSHEET FILES

Spot/Place Sensor Testing

TEST NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	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Suppose, for example,

[illegible]

TEST: K00257_1 3 May 1997 REC: SP-COL												
SECONDS	MAIN DUCT DIFF (IN HCO) ASS (PSIA)	MAIN DUCT ASS (PSIA)	GAS JACKET DIFF (IN HCO) ASS (PSIA)	GAS JACKET DIFF (IN HCO) ASS (PSIA)	NEWPORT OUTPUT (PSIA)	SI-MC (PSIA)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	TEMP (F)	MAIN DUCT TEMP (F)	CELL TEMP (F)	YBRT CELL OUTPUT (VOLTS)
430.019493	3.81654046	14.50725683	3.88181312	14.78025	135.425	68.804582	75.1	75.7	73.8	75.1		0.00023
435.019908	3.8140078	14.53810546	3.85243068	14.78025	157.215	68.330847	75.2	75.7	73.7	75.1		0.00028
440.018899	3.79889588	14.53515848	3.88181312	14.78025	157.473	68.987214	75.1	75.8	73.8	75		0.000231
445.019683	3.79813235	14.53735853	3.88181708	14.78025	155.675	68.126116	75.2	75.7	73.9	75		0.000231
450.019493	3.81554048	14.53810546	3.88116763	14.78025	157.55	68.9303158	75.7	75.7	73.8	75.3		0.000231
455.019909	3.80388893	14.53715848	3.88161511	14.7795	187.425	68.843317	75.3	75.8	73.9	75		0.000231
460.019968	3.82052521	14.53735853	3.88181312	14.7795	135.035	68.881688	75.2	75.8	73.8	75		0.000231
465.019247	3.82473883	14.53735853	3.88118768	14.78025	158.8	69.8378515	75.1	75.8	73.8	75		0.000231
470.019909	3.79718888	14.53735853	3.8533064	14.78025	158.7	69.273785	75.2	75.8	73.8	75.1		0.000231
475.019683	3.79738028	14.53735853	3.88181312	14.78025	155.475	68.330847	75	75.8	73.9	75.3		0.00023
480.019909	3.79922054	14.53835056	3.85386384	14.781	155.455	69.304769	75.1	75.8	73.9	75.3		0.00023
485.019909	3.79931535	14.53913846	3.85386384	14.781	189.828	69.4841745	75.1	75.8	73.8	75		0.00023
490.019683	3.79922054	14.53867721	3.89431468	14.781	158.735	69.4841745	75	75.8	73.9	75		0.00023
495.019909	3.79931535	14.53867721	3.89431468	14.7795	155.3	69.897214	74.8	75.8	73.8	75.3		0.00023
500.019683	3.80284467	14.53813846	3.89431468	14.78025	158.735	69.335308	74.7	75.7	73.8	75.1		0.00023
505.019909	3.79951741	14.53813846	3.89431468	14.78025	158.575	68.643437	74.7	75.7	73.9	75.2		0.00023
510.019073	3.77963593	14.53735853	3.88431468	14.7795	161.476	69.458345	74.8	75.8	73.8	75.2		0.00021
515.019909	3.77963593	14.53735853	3.88431468	14.78025	158.6	69.871155	75	75.8	73.9	75.2		0.00023
520.019683	3.79681135	14.53735853	3.89516412	14.781	158.75	70.673693	75.1	75.8	73.9	75.1		0.00023
525.019683	3.79673633	14.53813846	3.89431468	14.78025	158.9	69.780899	75.1	75.8	73.9	75		0.00023
530.019683	3.7985138	14.53835056	3.89516412	14.7795	181.595	68.8542465	75.1	75.8	73.9	75.2		0.00023
535.019909	3.79964325	14.53973583	3.89516412	14.7795	160.3	70.322384	75	75.8	73.9	75		0.00023
540.019683	3.80064395	14.53867721	3.89516412	14.7795	159.475	70.334166	75	75.8	73.9	75.1		0.00023
545.019909	3.80164395	14.53867721	3.89516412	14.7795	159.475	70.334166	75	75.8	73.9	75.1		0.00023
550.019683	3.80284467	14.53867721	3.89516412	14.7795	157.55	70.358575	75.3	75.8	73.9	75.2		0.00023
555.019909	3.81827767	14.53968072	3.89608793	14.7795	160.625	69.581063	75.3	75.8	73.9	75.1		0.000232
560.019968	3.76902053	14.53810646	3.89499492	14.7795	160.726	69.263309	75.5	75.8	73.9	74.8		0.000231
565.019909	3.81827767	14.53968072	3.89608793	14.7795	160.671	70.3490226	75.6	75.8	73.9	75		0.00023
570.019968	3.8111949	14.53735853	3.89499492	14.78025	159.8	70.086285	75.6	75.8	73.8	75		0.000231
575.019909	3.80421715	14.53735853	3.89608793	14.7795	160.1	70.365849	75.6	75.8	73.8	75.2		0.000232
580.040035	3.79813836	14.53810546	3.88744308	14.7795	158.2	70.022384	75.6	75.8	73.8	75.2		0.000232
585.019968	3.80364861	14.53735853	3.88680632	14.7795	158.9	70.022384	75.5	75.8	73.8	75.1		0.000231
590.019968	3.79869596	14.53980721	3.88680632	14.7795	156.675	69.9697645	75.5	75.8	73.8	75.1		0.000231
595.019968	3.79828026	14.53454533	3.88680632	14.78025	158.918	69.509204	75.4	75.8	73.8	75.1		0.000231
600.019683	3.84176739	14.53980721	3.89608793	14.7795	155.475	69.2707335	75.4	75.8	73.8	75.1		0.00023
605.019683	3.77788586	14.53515797	3.88744208	14.7795	159.35	69.7305225	75.5	75.7	73.8	75		0.00023
610.019683	3.77885842	14.53515797	3.88744208	14.7795	159.35	69.7305225	75.5	75.7	73.8	75		0.00023
615.019683	3.83048544	14.53810546	3.88744208	14.7795	158.55	69.8997845	75.6	75.7	73.8	74.9		0.00023
620.019683	3.82482966	14.53980721	3.88744208	14.7795	158.55	69.8997845	75.6	75.7	73.8	74.9		0.00023
625.019683	3.82482966	14.53980721	3.88744208	14.7795	158.55	69.8997845	75.6	75.7	73.8	74.9		0.00023
630.019683	3.82482966	14.53980721	3.88744208	14.7795	158.55	69.8997845	75.6	75.7	73.8	74.9		0.00023
635.019683	3.79813836	14.53810546	3.88744208	14.7795	158.55	69.8997845	75.6	75.7	73.8	74.9		0.00023
640.019683	3.82482966	14.53980721	3.88744208	14.7795	158.55	69.8997845	75.6	75.7	73.8	74.9		0.00023

Spot/Here Sensor Testing

SEC/ORG	MAIN DRYT DIFF IN H2O, ABS (PSIA)	MAIN DRYT DIFF IN H2O, ABS (PSIA)	GAS INJECT DIFF IN H2O, ABS (PSIA)	GAS INJECT DIFF IN H2O, ABS (PSIA)	NEWMPT OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIN DRYT/WHIT CELL TEMP (F)	WHIT CELL OUTPUT VOLTS
640.015988	3.63433413	14.50360721	3.86893396	14.7793	153.95	59.43201159	75.8	75.8	73.8	0.00231
640.015988	3.81890234	14.50810646	3.86893396	14.78035	159.875	75.176171	75.8	75.8	75.8	0.00231
640.015988	3.79300433	14.50735683	3.86893396	14.7798	159.4	75.086171	75.8	75.8	75.1	0.00231
640.015988	3.81302487	14.50810646	3.86893396	14.77875	158.6	75.176171	75.8	75.8	75.1	0.00231
640.015988	3.81427351	14.50810646	3.86893396	14.77975	160.278	68.818875	75.8	75.8	75.8	0.00231
640.015988	3.80061897	14.50668799	3.86893396	14.77875	159.375	70.498875	75.8	75.8	75.8	0.00231
676.040285	3.63551037	14.50668799	3.86893396	14.77875	157.6	68.971135	75.8	75.8	75.1	0.00231
680.015988	3.71984666	14.50433835	3.86893396	14.7795	158.8	70.155415	75.8	75.8	75.8	0.00231
680.015988	3.81990234	14.50810646	3.86893396	14.7798	159.95	68.818875	75.8	75.8	75.8	0.00231
680.015988	3.81678892	14.50810646	3.86893396	14.78025	158.875	70.432488	75.8	75.8	75.8	0.00231
680.015988	3.79031525	14.50433835	3.86893396	14.77875	158.2	70.432488	75.8	75.8	75.8	0.00231
700.015988	3.81686534	14.50810646	3.86893396	14.77875	158.5	70.176171	75.8	75.8	75.8	0.00231
700.015988	3.79876785	14.50810646	3.86893396	14.77875	158.75	68.818875	75.8	75.8	75.8	0.00231
710.015988	3.80114484	14.50433835	3.86893396	14.778	159.6	68.818875	75.8	75.8	75.8	0.00231
715.015988	3.80114484	14.50433835	3.86893396	14.778	159.6	68.818875	75.8	75.8	75.8	0.00231
720.015988	3.80988682	14.50810646	3.86893396	14.7793	158.75	68.818875	75.8	75.8	75.8	0.00231
725.015988	3.81890234	14.50810646	3.86893396	14.7793	157.8	68.818875	75.8	75.8	75.8	0.00231
730.015988	3.81890234	14.50810646	3.86893396	14.7793	157.8	68.818875	75.8	75.8	75.8	0.00231
735.015988	3.80920231	14.50810646	3.86893396	14.7793	157.45	68.818875	75.8	75.8	75.8	0.00231
740.015988	3.82815344	14.50810646	3.86893396	14.7793	157.45	68.818875	75.8	75.8	75.8	0.00231
745.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
750.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
755.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
760.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
765.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
770.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
775.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
780.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
785.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
790.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
795.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
800.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
805.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
810.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
815.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
820.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
825.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
830.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
835.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
840.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
845.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
850.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231
855.015988	3.80384592	14.50433835	3.86893396	14.7793	159.825	68.818875	75.8	75.8	75.8	0.00231

Speedwell Sensor Testing

TEST: KWS71 5 May 1987 WBL-SFCOL											
SECONDS MAIN DUCT MAIN DUCT GAS INJECT GAS INJECT WHITTAKER SMC (PPM) AMBIENT FLAMMABLE MAIN DUCT WHIT CELL											
DIFF IN H2 ABS (PSIA) DIFF (H2O) ABS (PSIA) OUTPUT (PPM) TEMP (F) GAS TEMP (F) TEMP (F) TEMP (F) OUTPUT (VOLTS)											
885.03	1.605678091	14.50435832	14.17895	162.3	88.039712	74.7	75.9	73.7	75.1	0.003232	74.9
885.02	1.60302361	14.50585759	14.17995	162.35	88.7404885	74.6	76.6	73.7	74.8	0.003031	74.8
870.02	1.606927305	14.50585759	14.17874	161.4	88.9203265	74.8	75.3	73.7	75.1	0.003211	74.9
875.02	1.60740618	14.50585759	14.17875	160.728	88.6103515	75	75.6	73.7	74.9	0.003232	74.9
885.06	1.602398538	14.50519472	14.17875	163.65	89.740818	75.2	76.6	73.7	74.8	0.003231	74.8
885.02	1.60260672	14.50260672	14.17875	162.475	88.9127775	75.2	76.6	73.7	75	0.003232	75
890.02	1.60435832	14.50435832	14.17875	163.475	88.88085	75.2	75.8	73.7	75.1	0.003232	75.1
895.02	1.603023609	14.503023609	14.17995	163.75	88.8866	75.1	76.6	73.8	75.1	0.003232	75.1
890.15	1.606927305	14.50435832	14.17875	162.175	89.304768	75.1	75.8	73.8	74.9	0.003232	74.9
145.49791 82.5742912 FAILED PASS											
WHL SMC SMC											
0.2 % OF 15 min value = 80% 15.2 min value											

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SmokePace Sensor Testing

TEST K0871.2 6 May 1987 WEC-SPON									
SECONDS	MAIN DUCT	MAIN DUCT	GAS INJECT	GAS INJECT	NEWPORT	SAC (PPHM)	AMBIENT	FLAMMABLE	MAIN DUCT
	DIFF. IN HO. ABS. (PSIA)	DIFF. IN HO. ABS. (PSIA)	DIFF. IN HO. ABS. (PSIA)	DIFF. IN HO. ABS. (PSIA)	DIFF. IN HO. ABS. (PSIA)	DIFF. IN HO. ABS. (PSIA)	TEMP (F)	TEMP (F)	TEMP (F)
400.01988	3.82030367	14.548788	3.82177688	14.810235	184.278	44.3302884	75.4	74.2	74.7
405.01999	3.82427993	14.54932457	3.82377688	14.811	184.328	40.307282	75.5	74.2	74.7
410.01999	3.828304229	14.54933112	3.828304229	14.811325	184.328	40.307282	75.5	74.2	74.7
415.01999	3.831818132	14.548788	3.831818132	14.81325	184.328	36.829565	75.4	74.2	74.7
420.01999	3.835919398	14.548788	3.835919398	14.81325	184.328	37.867883	75.4	74.2	74.7
425.01999	3.840307403	14.548788	3.840307403	14.814	184.328	37.867883	75.4	74.2	74.7
430.01999	3.844595405	14.548788	3.844595405	14.814	184.328	37.867883	75.4	74.2	74.7
435.01999	3.848883407	14.548788	3.848883407	14.814	184.328	37.867883	75.4	74.2	74.7
440.01999	3.853171409	14.548788	3.853171409	14.814	184.328	37.867883	75.4	74.2	74.7
445.01999	3.857459411	14.548788	3.857459411	14.814	184.328	37.867883	75.4	74.2	74.7
450.01999	3.861747413	14.548788	3.861747413	14.814	184.328	37.867883	75.4	74.2	74.7
455.01999	3.866035415	14.548788	3.866035415	14.814	184.328	37.867883	75.4	74.2	74.7
460.01999	3.870323417	14.548788	3.870323417	14.814	184.328	37.867883	75.4	74.2	74.7
465.01999	3.874611419	14.548788	3.874611419	14.814	184.328	37.867883	75.4	74.2	74.7
470.01999	3.878899421	14.548788	3.878899421	14.814	184.328	37.867883	75.4	74.2	74.7
475.01999	3.883187423	14.548788	3.883187423	14.814	184.328	37.867883	75.4	74.2	74.7
480.01999	3.887475425	14.548788	3.887475425	14.814	184.328	37.867883	75.4	74.2	74.7
485.01999	3.891763427	14.548788	3.891763427	14.814	184.328	37.867883	75.4	74.2	74.7
490.01999	3.896051429	14.548788	3.896051429	14.814	184.328	37.867883	75.4	74.2	74.7
495.01999	3.900339431	14.548788	3.900339431	14.814	184.328	37.867883	75.4	74.2	74.7
500.01999	3.904627433	14.548788	3.904627433	14.814	184.328	37.867883	75.4	74.2	74.7
505.01999	3.908915435	14.548788	3.908915435	14.814	184.328	37.867883	75.4	74.2	74.7
510.01999	3.913203437	14.548788	3.913203437	14.814	184.328	37.867883	75.4	74.2	74.7
515.01999	3.917491439	14.548788	3.917491439	14.814	184.328	37.867883	75.4	74.2	74.7
520.01999	3.921779441	14.548788	3.921779441	14.814	184.328	37.867883	75.4	74.2	74.7
525.01999	3.926067443	14.548788	3.926067443	14.814	184.328	37.867883	75.4	74.2	74.7
530.01999	3.930355445	14.548788	3.930355445	14.814	184.328	37.867883	75.4	74.2	74.7
535.01999	3.934643447	14.548788	3.934643447	14.814	184.328	37.867883	75.4	74.2	74.7
540.01999	3.938931449	14.548788	3.938931449	14.814	184.328	37.867883	75.4	74.2	74.7
545.01999	3.943219451	14.548788	3.943219451	14.814	184.328	37.867883	75.4	74.2	74.7
550.01999	3.947507453	14.548788	3.947507453	14.814	184.328	37.867883	75.4	74.2	74.7
555.01999	3.951795455	14.548788	3.951795455	14.814	184.328	37.867883	75.4	74.2	74.7
560.01999	3.956083457	14.548788	3.956083457	14.814	184.328	37.867883	75.4	74.2	74.7
565.01999	3.960371459	14.548788	3.960371459	14.814	184.328	37.867883	75.4	74.2	74.7
570.01999	3.964659461	14.548788	3.964659461	14.814	184.328	37.867883	75.4	74.2	74.7
575.01999	3.968947463	14.548788	3.968947463	14.814	184.328	37.867883	75.4	74.2	74.7
580.01999	3.973235465	14.548788	3.973235465	14.814	184.328	37.867883	75.4	74.2	74.7
585.01999	3.977523467	14.548788	3.977523467	14.814	184.328	37.867883	75.4	74.2	74.7
590.01999	3.981811469	14.548788	3.981811469	14.814	184.328	37.867883	75.4	74.2	74.7
595.01999	3.986099471	14.548788	3.986099471	14.814	184.328	37.867883	75.4	74.2	74.7
600.01999	3.990387473	14.548788	3.990387473	14.814	184.328	37.867883	75.4	74.2	74.7
605.01999	3.994675475	14.548788	3.994675475	14.814	184.328	37.867883	75.4	74.2	74.7
610.01999	3.998963477	14.548788	3.998963477	14.814	184.328	37.867883	75.4	74.2	74.7
 

TEST NUMBER_2	6 MAY 1997 WED SPAN	SECONDS	MAIN DUCT	MAIN DUCT	GAS INJECT	MEANPORT	SMC (PPM)	AGBENT	PUMPABLE	GAS TEMP (F)	MAIN DUCT	WHIT CELL	WHIT CELL
			DIFF IN P30 ABS (PSIA)	DIFF IN P30 ABS (PSIA)	DIFF IN P30 ABS (PSIA)	DIFF IN P30 ABS (PSIA)	DIFF IN P30 ABS (PSIA)	TEMP (F)			TEMP (F)	TEMP (F)	TEMP (F)
820	71958	3.5593222	14.54338	14.54338	14.54338	14.54338	14.54338	75.5	74.5	74.5	74.5	74.5	0.00023
804	06	3.9642711	14.54056	14.54056	14.54056	14.54056	14.54056	75.5	74.5	74.5	74.5	74.5	0.00023
516	01968	3.8020496	14.5515045	14.5515045	14.5515045	14.5515045	14.5515045	75.5	74.5	74.5	74.5	74.5	0.00023
815	01958	3.8306752	14.5502655	14.5502655	14.5502655	14.5502655	14.5502655	75.5	74.5	74.5	74.5	74.5	0.00023
820	04958	3.84175738	14.5493357	14.5493357	14.5493357	14.5493357	14.5493357	75.5	74.5	74.5	74.5	74.5	0.00023
825	058	3.8280725	14.5484865	14.5484865	14.5484865	14.5484865	14.5484865	75.5	74.5	74.5	74.5	74.5	0.00023
830	01958	3.89179655	14.5483595	14.5483595	14.5483595	14.5483595	14.5483595	75.5	74.5	74.5	74.5	74.5	0.00023
835	07001	3.81927587	14.5479354	14.5479354	14.5479354	14.5479354	14.5479354	75.5	74.5	74.5	74.5	74.5	0.00023
840	01958	3.82760516	14.5483557	14.5483557	14.5483557	14.5483557	14.5483557	75.5	74.5	74.5	74.5	74.5	0.00023
845	01958	3.8456624	14.5483327	14.5483327	14.5483327	14.5483327	14.5483327	75.5	74.5	74.5	74.5	74.5	0.00023
850	01958	3.8455395	14.5483372	14.5483372	14.5483372	14.5483372	14.5483372	75.5	74.5	74.5	74.5	74.5	0.00023
855	01958	3.8439532	14.5483868	14.5483868	14.5483868	14.5483868	14.5483868	75.5	74.5	74.5	74.5	74.5	0.00023
860	04958	3.81741196	14.5483956	14.5483956	14.5483956	14.5483956	14.5483956	75.5	74.5	74.5	74.5	74.5	0.00023
865	07001	3.84481324	14.5483956	14.5483956	14.5483956	14.5483956	14.5483956	75.5	74.5	74.5	74.5	74.5	0.00023
870	01958	3.89741295	14.5483885	14.5483885	14.5483885	14.5483885	14.5483885	75.5	74.5	74.5	74.5	74.5	0.00023
875	01958	3.8886874	14.5483853	14.5483853	14.5483853	14.5483853	14.5483853	75.5	74.5	74.5	74.5	74.5	0.00023
880	06	3.84053965	14.5483582	14.5483582	14.5483582	14.5483582	14.5483582	75.5	74.5	74.5	74.5	74.5	0.00023
885	01958	3.84437374	14.5479865	14.5479865	14.5479865	14.5479865	14.5479865	75.5	74.5	74.5	74.5	74.5	0.00023
890	01958	3.81951537	14.5483535	14.5483535	14.5483535	14.5483535	14.5483535	75.5	74.5	74.5	74.5	74.5	0.00023
895	06	3.81741934	14.5483634	14.5483634	14.5483634	14.5483634	14.5483634	75.5	74.5	74.5	74.5	74.5	0.00023
900	01958	3.87054391	14.5479364	14.5479364	14.5479364	14.5479364	14.5479364	75.5	74.5	74.5	74.5	74.5	0.00023
905	01958	3.85354117	14.5479388	14.5479388	14.5479388	14.5479388	14.5479388	75.5	74.5	74.5	74.5	74.5	0.00023
910	06	3.88118344	14.5479388	14.5479388	14.5479388	14.5479388	14.5479388	75.5	74.5	74.5	74.5	74.5	0.00023
915	01958	3.86387154	14.5483958	14.5483958	14.5483958	14.5483958	14.5483958	75.5	74.5	74.5	74.5	74.5	0.00023
920	01958	3.84248415	14.5479384	14.5479384	14.5479384	14.5479384	14.5479384	75.5	74.5	74.5	74.5	74.5	0.00023
925	04958	3.84279891	14.5483357	14.5483357	14.5483357	14.5483357	14.5483357	75.5	74.5	74.5	74.5	74.5	0.00023
930	01958	3.87180235	14.5479388	14.5479388	14.5479388	14.5479388	14.5479388	75.5	74.5	74.5	74.5	74.5	0.00023
935	01958	3.86204872	14.5479384	14.5479384	14.5479384	14.5479384	14.5479384	75.5	74.5	74.5	74.5	74.5	0.00023
940	01958	3.89330791	14.5483958	14.5483958	14.5483958	14.5483958	14.5483958	75.5	74.5	74.5	74.5	74.5	0.00023
945	01958	3.84202987	14.5483535	14.5483535	14.5483535	14.5483535	14.5483535	75.5	74.5	74.5	74.5	74.5	0.00023
950	01958	3.86564765	14.5483958	14.5483958	14.5483958	14.5483958	14.5483958	75.5	74.5	74.5	74.5	74.5	0.00023
955	04958	3.87429582	14.5479364	14.5479364	14.5479364	14.5479364	14.5479364	75.5	74.5	74.5	74.5	74.5	0.00023
960	01958	3.84040326	14.5483958	14.5483958	14.5483958	14.5483958	14.5483958	75.5	74.5	74.5	74.5	74.5	0.00023
965	01958	3.86142348	14.5483958	14.5483958	14.5483958	14.5483958	14.5483958	75.5	74.5	74.5	74.5	74.5	0.00023
970	01958	3.86677362	14.5483958	14.5483958	14.5483958	14.5483958	14.5483958	75.5	74.5	74.5	74.5	74.5	0.00023
975	01958	3.86804873	14.5479364	14.5479364	14.5479364	14.5479364	14.5479364	75.5	74.5	74.5	74.5	74.5	0.00023
980	01958	3.86804873	14.5479364	14.5479364	14.5479364	14.5479364	14.5479364	75.5	74.5	74.5	74.5	74.5	0.00023
985	01958	3.86804873	14.5479364	14.5479364	14.5479364	14.5479364	14.5479364	75.5	74.5	74.5	74.5	74.5	0.00023
990	01958	3.86804873	14.5479364	14.5479364	14.5479364	14.5479364	14.5479364	75.5	74.5	74.5	74.5	74.5	0.00023

XXXXXX XXXXX

TEST: K000671_2_8 May 1997 REC-SP00L												
RECORDS		MAIN DUCT	MANIF DUCT	GAS INJECT	NEWPORT	SWAC (PPM)	AMBIENT	FLAMMABLE	MANIF DUCT	WHIT CELL		
DIFF (IN REC ASS) (PSIA)		DIFF (IN REC ASS) (PSIA)	DIFF (IN REC ASS) (PSIA)	GAS INJECT	NEWPORT	SWAC (PPM)	TEMP (F)	GAS TEMP (F)	TEMP (F)	TEMP (F)		
60.003	3.645760955	3.645760955	3.645760955	14.8185	164.875	32.0907534	74.8	74.7	73.9	74.8	0.002323	
605.01998	3.64491072	14.5473504	3.643930864	14.8185	167.2	31.771521	75.1	74.7	73.9	74.5	0.002531	
815.01989	3.67890251	14.5473504	3.64523408	14.8185	166.278	31.7679508	74.7	74.7	73.9	74.8	0.002231	
815.01989	3.67890251	14.5473504	3.64523408	14.8185	166.278	31.7679508	74.7	74.7	73.9	74.8	0.002231	
815.01989	3.67890251	14.5473504	3.64523408	14.8185	166.278	31.7679508	74.7	74.7	73.9	74.8	0.002231	
825.01998	3.66869318	14.5473504	3.64178496	14.8185	166.775	31.3663068	75.1	74.7	73.9	74.8	0.002531	
825.01989	3.66869318	14.5473504	3.64178496	14.8185	166.775	31.3663068	75.1	74.7	73.9	74.8	0.002531	
825.01989	3.66869318	14.5473504	3.64178496	14.8185	166.775	31.3663068	75.1	74.7	73.9	74.8	0.002531	
835.01998	3.66869318	14.5473504	3.64178496	14.8185	166.775	31.3663068	75.1	74.7	73.9	74.8	0.002531	
835.01998	3.66869318	14.5473504	3.64178496	14.8185	166.775	31.3663068	75.1	74.7	73.9	74.8	0.002531	
835.01998	3.66869318	14.5473504	3.64178496	14.8185	166.775	31.3663068	75.1	74.7	73.9	74.8	0.002531	
845.01998	3.65116544	14.5473504	3.64241104	14.8185	167.475	31.3685594	74.8	74.7	73.9	74.8	0.002232	
845.01998	3.65116544	14.5473504	3.64241104	14.8185	167.475	31.3685594	74.8	74.7	73.9	74.8	0.002232	
845.01998	3.65116544	14.5473504	3.64241104	14.8185	167.475	31.3685594	74.8	74.7	73.9	74.8	0.002232	
855.01989	3.65116544	14.5473504	3.64241104	14.8185	170.46	31.423490	74.8	74.7	73.9	74.8	0.002232	
855.01989	3.65116544	14.5473504	3.64241104	14.8185	170.46	31.423490	74.8	74.7	73.9	74.8	0.002232	
855.01989	3.65116544	14.5473504	3.64241104	14.8185	170.46	31.423490	74.8	74.7	73.9	74.8	0.002232	
865.01998	3.64426872	14.5473504	3.64426872	14.8185	169.325	31.9254002	74.8	74.7	73.9	74.8	0.002233	
865.01998	3.64426872	14.5473504	3.64426872	14.8185	169.325	31.9254002	74.8	74.7	73.9	74.8	0.002233	
875.01989	3.626115064	14.5473504	3.64426872	14.8185	168.815	31.414756	74.8	74.7	73.9	74.8	0.002232	
875.01989	3.626115064	14.5473504	3.64426872	14.8185	168.815	31.414756	74.8	74.7	73.9	74.8	0.002232	
885.01989	3.626115064	14.5473504	3.64426872	14.8185	168.275	30.860216	75.1	74.7	73.9	74.8	0.002232	
885.01989	3.626115064	14.5473504	3.64426872	14.8185	168.275	30.860216	75.1	74.7	73.9	74.8	0.002232	
885.01989	3.626115064	14.5473504	3.64426872	14.8185	168.275	30.860216	75.1	74.7	73.9	74.8	0.002232	
895.01998	3.61812767	14.5473504	3.645165304	14.8185	170.46	30.501705	74.8	74.7	73.9	74.5	0.002332	
895.01998	3.61812767	14.5473504	3.645165304	14.8185	170.46	30.501705	74.8	74.7	73.9	74.5	0.002332	
900.01999	3.633240834	14.5510853	3.64818504	14.82075	170.46	31.914295	75.5	74.7	73.9	74.4	0.002332	
<div>80% of 15 min value</div> <div>SWAC</div> <div>15.435</div> <div>37.9136653</div> <div>PASS</div> <div>15.2 min value</div> <div>SWAC</div> <div>15.435</div> <div>37.9136653</div> <div>PASS</div>												

Spiegel, David

[illegible]

SpotPace Sensor Testing

TEST RWB071 3 6 MAY 1857 WEC-SP502L												
SECONDS	MAIN DUCT T	MAIN DUCT C	MAIN DUCT A	GAS SUBJECT	INLET PRESS	REPORT	SNV (PPM)	AMBIENT TEMP (F)	FLAMMABLE 55AS TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL (VOLTS)
	DIFF (IN/20)	DIFF (IN/20)	DIFF (IN/20)	DIFF (PSIA)	DIFF (PSIA)	DIFF (PSIA)	DIFF (PSIA)	DIFF (PSIA)	DIFF (PSIA)	DIFF (PSIA)	DIFF (PSIA)	DIFF (PSIA)
200.01869	3.76312572	14.5508348	3.8302832	14.823	181.5	25.74875	75.7	74.8	74.8	74.8	74.8	0.00023
200.01869	3.83171607	14.5508348	3.8397292	14.822	180.2	25.58084	75.7	74.9	74.9	74.9	74.9	0.00023
210.01869	3.81127787	14.5508348	3.8392932	14.82275	180.4	26.2215769	75.7	74.9	74.9	74.9	74.9	0.00023
215.01869	3.79426256	14.5503342	3.8302832	14.82075	180.475	25.863589	75.6	74.9	74.9	74.9	74.9	0.00023
220.01869	3.79114053	14.5493357	3.84039408	14.82205	181.36	25.868356	75.4	74.9	74.9	74.9	74.9	0.00023
225.01869	3.78288968	14.5493357	3.83950584	14.823	183.379	25.734818	75.3	74.8	74.8	74.8	74.8	0.00023
230.01869	3.77528894	14.5483357	3.8382832	14.823	183.075	25.734818	75.2	74.8	74.8	74.8	74.8	0.00023
235.01869	3.77528894	14.5483357	3.8382832	14.82375	182.6	25.734818	75.2	74.8	74.8	74.8	74.8	0.00023
240.01869	3.76561997	14.545556	3.8390864	14.823	181.225	25.462172	75.3	74.9	74.9	74.9	74.9	0.00023
245.01869	3.79175147	14.5493357	3.8382832	14.82375	181.675	25.4526635	75.3	74.9	74.9	74.9	74.9	0.00023
250.01869	3.78018449	14.5508348	3.8397292	14.823	183.5	25.3889168	75.3	74.9	74.9	74.9	74.9	0.00023
255.01869	3.77528894	14.5508348	3.83950584	14.823	183.379	25.7802475	75.4	74.8	74.8	74.8	74.8	0.00023
260.01869	3.77488836	14.5508348	3.84179486	14.823	183.275	25.8803356	75.4	75.3	74.8	74.8	74.8	0.00023
265.01869	3.78514268	14.5493357	3.84039408	14.823	184.4	26.8316508	75.5	74.9	74.9	74.9	74.9	0.00023
270.01869	3.82269495	14.5515845	3.84179486	14.82375	183.15	26.8928095	75.9	74.9	74.9	74.9	74.9	0.00023
275.01869	3.77425823	14.5493357	3.84119890	14.823	184.4	26.810245	75.6	74.9	74.9	74.9	74.9	0.00023
280.01869	3.78175147	14.5508348	3.84241104	14.8235	182.225	26.8103168	75.8	74.9	74.9	74.9	74.9	0.00023
285.01869	3.752511953	14.5508348	3.84241104	14.823	182.175	25.810245	75.6	74.8	74.8	74.8	74.8	0.00023
290.03	3.75551309	14.5508348	3.84179486	14.8225	182.25	25.8572955	75.6	75.3	74.8	74.8	74.8	0.00023
295.01869	3.77528894	14.5508348	3.84179486	14.823	184.375	26.0576018	75.5	75.3	74.8	74.8	74.8	0.00023
300.01869	3.79023106	14.5508348	3.84179486	14.8225	181.45	26.400663	75.5	75.3	74.8	74.8	74.8	0.00023
305.01869	3.78987703	14.5508348	3.84179486	14.823	183.525	26.510245	75.4	75.3	74.8	74.8	74.8	0.00023
310.01869	3.77693512	14.5493357	3.84179486	14.82225	182.425	26.462244	75.3	75.3	74.8	74.8	74.8	0.00023
315.01869	3.77305768	14.5493357	3.84179486	14.823	183.28	26.828145	75.4	75.3	74.8	74.8	74.8	0.00023
320.01869	3.78487818	14.5508348	3.84179486	14.82375	184.4	26.247308	75.3	75.3	74.8	74.8	74.8	0.00023
325.01869	3.7945214	14.5508348	3.84179486	14.82225	184.375	26.708549	75.3	75.3	74.8	74.8	74.8	0.00023
330.01869	3.79612072	14.5515845	3.8415892	14.823	184.95	26.708549	75.3	75.3	74.8	74.8	74.8	0.00023
335.01869	3.78175147	14.5508348	3.8415892	14.82225	187.15	27.4035563	75.2	75.3	74.8	74.8	74.8	0.00023
340.01869	3.79489782	14.5508348	3.8415892	14.82375	185.35	26.8103168	75.3	75.3	74.8	74.8	74.8	0.00023
345.01869	3.80521773	14.5508348	3.840597128	14.823	186.835	26.8383566	75.3	75.3	74.8	74.8	74.8	0.00023
350.01869	3.77681254	14.5508348	3.84241104	14.8225	184.4	26.062172	75.3	75.3	74.8	74.8	74.8	0.00023
355.01869	3.77488836	14.5508348	3.84241104	14.823	184.4	26.062172	75.3	75.3	74.8	74.8	74.8	0.00023
360.01869	3.79612072	14.5483357	3.8415892	14.823	189.275	26.8879495	75.2	75.3	74.8	74.8	74.8	0.00023
365.01869	3.79351741	14.5508348	3.84053376	14.8225	187.25	27.248158	75.3	75.3	74.8	74.8	74.8	0.00023
370.01869	3.77930584	14.5508348	3.84053376	14.823	187.525	26.8281225	75.4	75.3	74.8	74.8	74.8	0.00023
375.01869	3.77930584	14.5508348	3.84053376	14.823	184.375	26.708549	75.4	75.3	74.8	74.8	74.8	0.00023
380.01869	3.78051033	14.5508348	3.84053376	14.82375	184.425	26.708549	75.4	75.3	74.8	74.8	74.8	0.00023
385.01869	3.78262903	14.5508348	3.84053376	14.82225	184.4	26.44458	75.5	75.3	74.8	74.8	74.8	0.00023
390.01869	3.78426155	14.5508348	3.84053376	14.82225	184.4	26.44458	75.5	75.3	74.8	74.8	74.8	0.00023
395.01869	3.78426155	14.5508348	3.84053376	14.82375	184.4	26.44458	75.5	75.3	74.8	74.8	74.8	0.00023
400.01869	3.77931404	14.5483357	3.84053376	14.823	186.525	26.403828	75.6	75.3	74.8	74.8	74.8	0.00023

SpeedPlace Sensor Testing

TEST: K145871_3 6 May 1837 WEC-SPOOL									
SECONDS	MAIN DUCT	MAIN DUCT	GAS INJECT	NEKPORT	SMC (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL
OFF ON HCO	ABSS (PSIA)	DIFF (IN H ₂ O)	ABSS (PSIA)	OUTPUT (PPM)	TEMP (°F)	TEMP (°F)	GAS TEMP (°F)	TEMP (°F)	TEMP (°F)
832.01999	3.78382898	14.548696	3.85357539	14.8275	158.35	37.47635	75.6	74.1	74.8
832.01999	3.78435358	14.550683	3.85354416	14.8275	158.3	27.435168	75.6	74.1	74.5
832.01999	3.78414268	14.5483357	3.85387538	14.8275	157.7	28.2712835	75.7	74.1	74.5
832.01999	3.82115348	14.5433357	3.85242448	14.8275	157.435	27.733718	75.7	74.1	74.5
832.01999	3.79176579	14.5505853	3.85367536	14.8275	158.5	27.8943848	75.8	74.1	74.5
832.01999	3.78733869	14.5505853	3.85179404	14.8275	158.325	28.041273	75.7	74.1	74.5
832.01999	3.77715715	14.5505853	3.85204992	14.8275	158.435	28.4357135	75.6	74.1	74.8
832.01999	3.80627335	14.5505349	3.85356682	14.8275	158.825	28.6307518	75.6	74.1	74.5
842.01999	3.74425623	14.5518645	3.85242448	14.8275	158.275	28.5257875	75.4	74.1	74.8
845.01	3.7425833	14.5518348	3.85242448	14.8275	158.535	28.199505	75.4	74.1	74.7
851.01999	3.77650661	14.5505853	3.85356692	14.8245	158.275	28.533083	75.4	74.1	74.5
855.01999	3.81810713	14.5493357	3.85387538	14.8345	158.4	28.3744965	75.4	74.1	74.5
861.06	3.77238242	14.5505853	3.85387538	14.8275	158.375	28.0169435	75.4	74.1	74.7
865.01999	3.83603377	14.5415848	3.8543008	14.8255	158.375	28.451346	75.3	74.1	74.5
872.01999	3.81550653	14.5518348	3.85350496	14.826	158.35	28.6820105	75.4	74.1	74.8
875.01999	3.81696054	14.5513342	3.85350492	14.826	158.35	28.7443205	75.4	74.1	74.7
883.01999	3.81052280	14.5505853	3.85350448	14.8255	158.325	28.5330355	75.4	74.1	74.5
885.01999	3.82115348	14.5518348	3.85387538	14.8275	157.075	28.188671	75.3	74.1	74.7
895.04001	3.80651965	14.5505349	3.85356682	14.8275	157.325	28.3744967	75.3	74.1	74.7
898.01999	3.80854808	14.5483357	3.85354416	14.8255	158.575	29.015194	75.4	74.1	74.7
902.01999	3.80827335	14.5505853	3.85387538	14.8245	158.325	28.188671	75.4	74.1	74.5

90% OF 15 min value	95.2 min value	90% ?
WHR	SMC	SMC
148.8535	28.253735/PASS	PAIRED

TEST #00377_1 1 May 1997 WELB SPOCK												
SEC#	MAIN DUST (EFF IN PE ASS)	MAIN DUST ASS (PE#)	GAS INJECT DIFF IN HO ASS	GAS INJECT HO ASS (PE#)	ORBITER OUTPUT (PM)	AMBD (PPM)	FLAMMABLE GAS TEMP (F)	TEMP (F)	MAIN DUST TEMP (F)	WELB CELL TEMP (F)	WELB CELL VOLTS	
0.015985	3.640380	14.473639	0.003833	14.3028	0.375	5.647355	75	74.3	73.9	74.2	0.000203	
0.015986	1.013901	14.472842	0.003792	14.34675	2.025	8.046570	75.2	74.6	73.9	74.2	0.000216	
0.015988	3.84110212	14.472842	0.003782	14.34075	118.45	481.57641	75.3	74	74.2	0.000254		
15.015988	3.83953408	14.4730538	0.0034718	14.3475	500	1184.08858	75.4	74.8	74.3	0.000313		
20.015988	3.81239897	14.473575	0.0047775	14.34675	568	1532.8467	75.6	74.8	74.1	74.2	0.000496	
25.015988	3.8267809	14.473828	0.01678	14.3475	1166.25	1712.0352	75.6	74.5	74.1	74.2	0.000496	
30.015988	3.8133997	14.4739538	0.0197898	14.34675	1357	1759.69381	75.8	74.5	74.1	74.2	0.000433	
35.015988	3.8350225	14.4738236	0.0180434	14.34675	1459.5	1834.38898	75.8	74.6	74.1	74.2	0.000433	
38.015988	3.83240654	14.4738236	0.0175418	14.34675	1810.5	1885.5751	75.6	74.5	74.3	0.000463		
40.015988	3.82969078	14.4738236	0.0154518	14.3475	1890.25	1883.77035	75.4	74.8	74.3	0.000478		
45.015988	3.81686078	14.473575	0.01574615	14.34675	1726.75	1867.41528	75.4	74.6	74.3	0.00043		
50.015988	3.82020838	14.474375	0.0149438	14.3475	1759.5	1858.12937	75.5	74.5	74.3	0.000466		
55.015988	3.81672638	14.474375	0.0110439	14.3475	1796.25	1863.24637	74.6	74.5	74.1	74.3	0.000466	
58.015988	1.0311578	14.474375	0.0110435	14.34675	1715	1817.53535	75.7	74.6	74.1	74.3	0.000485	
60.015988	3.79814284	14.474375	0.01341838	14.34675	1841.25	1811.98733	75.7	74.6	74.1	74.3	0.000469	
70.015988	3.80739754	14.474375	0.01351818	14.3475	1853	1813.78737	75.8	74.2	74.2	0.000489		
80.015988	3.82246036	14.4738238	0.0058478	14.3475	1873.75	1816.18942	75.6	74.6	74.1	74.2	0.000502	
85.015988	3.80177011	14.4741531	0.01705968	14.34625	1890	1817.46939	75.8	74	74.2	0.000502		
90.015988	3.85904441	14.474375	0.02029388	14.34625	1895.5	1815.91732	75.9	74	74.2	0.000502		
95.015988	3.83838698	14.474375	0.0272598	14.34675	1900.5	1818.1403	75.7	74.6	73.8	74.2	0.000506	
100.015988	3.78238098	14.474375	0.0041558	14.3469	1887	1823.34038	75.8	74.8	73.8	74.3	0.000507	
105.015988	3.83991158	14.4738236	0.00478812	14.34625	1912.75	1821.44632	75.8	74.8	73.9	74.2	0.000507	
110.015988	3.78261053	14.4738238	0.00248728	14.3475	1919.5	1817.90173	75.7	74.6	73.8	74.2	0.000508	
115.015988	3.83116728	14.4738238	0.0026128	14.34625	1920.75	1820.15674	75.7	74.8	73.8	74.2	0.000506	
120.015988	3.83961168	14.4738236	0.002728	14.3465	1930.75	1815.35995	75.6	74.6	73.7	74.3	0.00051	
125.015988	3.85554668	14.474375	0.0004104	14.3465	1934.5	1822.77359	75.8	74.6	73.8	74.3	0.00051	
130.015988	3.83176037	14.472842	0									

TEST KVS272_1 2 May 1987 WEC-SPOCL											
SECONDS	MAIN DUCT DIFF (IN H2 ABG (PSIA)	MAIN DUCT ABG (PSIA)	GAS INJECT DIFF (IN H2 ABG (PSIA)	GAS INJECT ABG (PSIA)	WINDTUNNEL OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	TEMP (F)	HAIR DUCT TEMP (F)	WHIT CELL CONC (%)
200.01500	3.74430214	14.47362354	0.59202076	14.3445	1983.75	15.30	324.15	74.7	73.4	74.3	0.000515
205.04001	3.81677671	14.47362358	0.59169480	14.3445	1953.75	15.26	325.48	74.7	73.4	74.3	0.000514
210.01500	3.81677669	14.47362312	0.59205312	14.3445	1959.25	15.24	324.66	74.7	73.4	74.3	0.000514
215.01500	3.80027335	14.47362238	0.59200576	14.34375	1961.5	15.23	325.55	74.7	73.5	74.3	0.000515
220.04001	3.82054001	14.47362338	0.59200678	14.3445	1961.75	15.21	325.61	74.7	73.5	74.3	0.000515
225.01500	3.82503037	14.47362339	0.59228032	14.3445	1963.25	15.20	325.74	74.7	73.4	74.3	0.000515
230.01500	3.80503037	14.47362338	0.59170644	14.34525	1964.25	15.22	325.55	74.6	73.5	74.3	0.000514
235.01500	3.83113773	14.47362338	0.58877890	14.34525	1962.75	15.22	325.55	74.6	73.5	74.3	0.000514
240.01500	3.80364302	14.47362338	0.59040404	14.3445	1961.5	15.20	325.71	74.6	73.5	74.3	0.000514
245.01500	3.79529903	14.47362338	0.59077595	14.34525	1961.75	15.24	325.51	74.7	73.5	74.3	0.000514
250.01500	3.80114484	14.47362338	0.59040404	14.34525	1963.75	15.16	325.67	74.6	73.5	74.3	0.000515
255.01500	3.81113718	14.47362338	0.59170624	14.34525	1964.5	15.18	325.58	74.7	73.7	74.3	0.000515
260.01500	3.83306357	14.47362338	0.58815312	14.3445	1963.75	15.17	325.73	74.7	73.7	74.3	0.000514
265.01500	3.83834441	14.47362338	0.58850592	14.34375	1965.5	15.15	325.83	74.6	73.7	74.3	0.000515
270.01500	3.80364302	14.47362338	0.59040404	14.3445	1967.75	15.18	325.55	74.7	73.7	74.3	0.000515
275.01500	3.83534608	14.47362338	0.58815312	14.34525	1965.75	15.17	325.55	74.7	73.8	74.3	0.000515
280.01500	3.81032385	14.47362338	0.59040404	14.34525	1965.25	15.15	325.55	74.7	73.8	74.3	0.000515
285.01500	3.83333698	14.47362338	0.58850592	14.3445	1967.25	15.15	325.55	74.7	73.8	74.3	0.000515
290.01500	3.80739734	14.47362338	0.58850592	14.3445	1967.75	15.15	325.55	74.7	73.8	74.3	0.000515
295.01500	3.80739734	14.47362338	0.58850592	14.3445	1967.75	15.15	325.55	74.7	73.8	74.3	0.000515
300.01500	3.83030293	14.47362338	0.59200576	14.3445	1968.75	15.17	325.55	74.7	73.7	74.3	0.000515
305.01500	3.81642938	14.47362338	0.59040404	14.3445	1968.75	15.17	325.55	74.7	73.7	74.3	0.000515
310.01500	3.83404047	14.47362338	0.58815312	14.3445	1971.75	15.22	325.55	74.7	73.6	74.3	0.000514
315.01500	3.806147	14.47362338	0.59040404	14.3445	1973.75	15.22	325.55	74.7	73.6	74.3	0.000517
320.01500	3.836147	14.47362338	0.58850592	14.34375	1973.75	15.22	325.55	74.6	73.7	74.3	0.000517
325.01500	3.81365024	14.47362338	0.58850592	14.3445	1973.75	15.22	325.55	74.6	73.7	74.3	0.000517
330.01500	3.81191711	14.47362338	0.58850592	14.34375	1979.75	15.23	325.55	74.7	73.7	74.3	0.000517
335.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
340.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
345.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
350.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
355.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
360.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
365.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
370.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
375.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
380.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
385.01500	3.82177673	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
390.01500	3.81815112	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
395.01500	3.83528221	14.47362338	0.58850592	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517
400.01500	3.806147	14.47362338	0.59040404	14.3445	1981.75	15.23	325.55	74.7	73.7	74.3	0.000517

[illegible]

TEST: W187272 - 2 May 1997 REC-5003L												
SECONDS	MAIR DUCT DIFF (IN H2O)	MAIR DUCT ASB (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ASB (PSIA)	WHIRLWIND OUTPUT	SMC (PPHM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIR DUCT TEMP (F)	WHIRLWIND TEMP (F)	WHIT CELL (COLTS)	
400.01938	1.5340051	14.4638757	0.98953472	14.34445	2003.1960	35.385	74.8	74.8	74.3	74.3	0.00052	
405.01938	1.63653468	14.4703254	0.98953472	14.3445	2003.25	35.65	74.6	74.6	74.3	74.3	0.00027	
410.01938	1.51856024	14.4705254	0.98783822	14.34525	2004.75	134.8	74.346	74.8	74.3	74.3	0.00052	
415.04031	1.81869334	14.4732254	0.98953472	14.34525	2005.1847	38.931	74.8	74.8	74.3	74.3	0.00032	
420.01938	1.63615966	14.471375	0.988514016	14.34525	2005.5	154.7	75.752	74.8	74.3	74.3	0.00052	
425.01938	1.80051566	14.469575	0.98853472	14.34525	2005.75	154.7	74.66	74.8	74.3	74.3	0.00052	
430.01938	1.81869334	14.4732254	0.98953472	14.34525	2004.1944	35.916	73.7	74.8	74.3	74.3	0.000518	
435.01938	1.61652236	14.468757	0.98853472	14.3445	2004.1946	35.916	73.7	74.8	74.3	74.3	0.00052	
440.01938	1.80969962	14.4698757	0.98853472	14.3445	2002.75	153.1	74.44	74.8	74.3	74.3	0.000518	
445.04038	1.82427803	14.4732254	0.98953472	14.34375	2003.5	154.0	73.385	74.8	74.3	74.3	0.000518	
450.01938	1.63663233	14.4705254	0.98656564	14.3436	2003.8	160.6	74.842	74.8	74.3	74.3	0.000518	
455.01938	1.80991156	14.4698757	0.98656564	14.3445	2001.75	134.8	74.6	74.8	74.3	74.3	0.000518	
460.01938	1.81869334	14.4732254	0.98953472	14.3445	2001.75	134.8	74.6	74.8	74.3	74.3	0.000518	
465.01938	1.64741403	14.471375	0.98471308	14.34525	2003.5	154.6	75.878	74.8	74.3	74.3	0.00027	
470.01938	1.84816438	14.4698757	0.98953472	14.3445	2007.25	164.8	75.932	74.8	74.3	74.3	0.00052	
475.01938	1.83115738	14.4732254	0.98953472	14.3445	2004.1947	37.872	74.8	74.8	74.3	74.3	0.000518	
480.01938	1.64800778	14.4732254	0.98953472	14.3445	2003.8	164.8	74.842	74.8	74.3	74.3	0.000518	
485.01938	1.81869334	14.4732254	0.98953472	14.34525	2003.75	154.3	74.638	74.8	74.3	74.3	0.000518	
490.01938	1.6611578	14.4732254	0.98953472	14.34525	2003.75	154.3	74.638	74.8	74.3	74.3	0.000518	
495.01938	1.80953472	14.4698757	0.98953472	14.34375	2003.1942	35.916	74.9	74.9	74.3	74.3	0.000518	
500.01938	1.80953472	14.4698757	0.98953472	14.34375	2003.1942	35.916	74.9	74.9	74.3	74.3	0.000518	
505.01938	1.80953472	14.4698757	0.98953472	14.34375	2003.1942	35.916	74.9	74.9	74.3	74.3	0.000518	
510.01938	1.81869334	14.4732254	0.98953472	14.3445	2003.8	164.8	74.842	74.8	74.3	74.3	0.000518	
515.01938	1.83402577	14.4698757	0.98953472	14.3445	2004.25	153.7	74.841	74.8	74.3	74.3	0.000518	
520.01938	1.81869334	14.4732254	0.98953472	14.3445	2004.1946	35.916	74.9	74.9	74.3	74.3	0.000518	
525.01938	1.84241266	14.4698757	0.98953472	14.34525	2001.75	133.8	74.616	74.8	74.3	74.3	0.00052	
530.01938	1.81871638	14.4698757	0.98953472	14.3446	2001.1842	45.241	73.9	74.9	74.1	74.3	0.000518	
535.01938	1.82115348	14.4698757	0.98953472	14.3446	2001.1542	45.241	73.9	74.9	74.1	74.3	0.000518	
540.01938	1.83815996	14.471375	0.98953472	14.34525	1999.5	154.1	43.723	74.9	74.1	74.3	0.00052	
545.01938	1.80452113	14.4698757	0.98953472	14.3445	2003.1535	31.13	73.9	74.9	74.1	74.3	0.00052	
550.01938	1.79614369	14.4705254	0.98953472	14.3446	2003.1535	31.13	73.9	74.9	74.1	74.3	0.000518	
555.01938	1.76717717	14.4732254	0.98953472	14.3445	1999.5	152.7	73.9	74.9	74.1	74.3	0.000518	
560.04038	1.82740618	14.4732254	0.98953472	14.34525	1998.5	152.7	73.9	74.9	74.1	74.3	0.000518	
565.01938	1.80177011	14.4705254	0.98953472	14.3446	2001.1535	31.13	73.9	74.9	74.1	74.3	0.000518	
570.01938	1.80969962	14.4705254	0.98953472	14.3446	2000.75	152.4	57.16	74.8	74.3	74.3	0.00052	
575.01938	1.82820315	14.4732254	0.98953472	14.3445	1999.5	152.7	73.9	74.9	74.1	74.3	0.000518	
580.01938	1.77513404	14.4705254	0.98953472	14.3445	2001.1535	31.13	73.9	74.9	74.1	74.3	0.000518	
585.01938	1.80114484	14.4705254	0.98953472	14.34525	1697.15	152.6	53.941	74.9	74.3	74.4	0.00052	
590.01938	1.80898922	14.4698757	0.98953472	14.3445	1997.25	132.8	103.85	74.9	74.3	74.3	0.000518	
595.01938	1.78951536	14.4698757	0.98953472	14.3445	1894.	138.8	73.9	74.9	74.3	74.3	0.000518	

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TEST: AR0007_2 May 1997 WFO-SP001												
SECNO	MAIN DUCT DIFF (IN ABS PRESS)	MAIN DUCT DIFF (IN H2O ABS PRESS)	GAS INJECT DIFF (IN H2O ABS PRESS)	WATER OUTPUT (PPM)	SWC (PPM)	AMBIENT FLAMMABLE GAS TEMP (°F)	MAIN DUCT TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL VOLTS			
500	0.0000	3.6255456	14.4951261	0.9907592	1994.7	1324.00917	74.6	74.6	74.3			
805	0.0001	3.8667227	14.4911180	0.98932416	1384.75	1833.92176	75.4	75.7	74.3			
810	0.0000	3.64119572	14.4702554	0.98902582	134343	1691.75	1921.93981	74.4	74.9			
815	0.0000	3.8389585	14.4881281	0.98925416	15.3443	1891.75	1921.93981	74.9	74.9			
820	0.0000	3.833503469	14.4831281	0.98914486	14.54375	1932.1	1917.34855	75.3	74.9			
825	0.0000	3.81602713	14.4706254	0.98941486	14.34252	1960.75	1917.88678	74.9	74.3			
830	0.0000	3.839811156	14.4706254	0.98941396	14.3445	1989.0	1916.80261	74.3	74.4			
835	0.0001	3.82685672	14.4706254	0.98941486	14.34255	1989.5	1914.91595	75.3	74.3			
840	0.0001	3.83953353	14.4596757	0.98915624	12.3445	1989.0	1914.29368	74.9	74.9			
845	0.0000	3.838281391	14.4706254	0.98910224	14.34225	1988.75	1916.80773	75.4	74.3			
850	0.0000	3.80177011	14.4706254	0.989271538	14.34252	1987.0	1916.16402	74.8	74.3			
855	0.0000	3.81602713	14.4891051	0.989273928	14.340228	1993.75	1915.80773	75.4	74.9			
860	0.0000	3.80000000	14.4891051	0.989139096	14.3451	1989.0	1915.88944	75.3	74.6			
865	0.0000	3.80652173	14.4898751	0.97877152	14.3445	1984.0	1911.88353	75.4	74.3			
870	0.0000	3.89927335	14.4891051	0.97954908	14.3415	1983.75	1911.19324	74.4	75.0			
875	0.0000	3.880239938	14.4888757	0.97954908	14.34225	1978.25	1918.11882	75.2	74.8			
880	0.0000	3.81673336	14.471375	0.97957152	14.34225	1986.5	1904.58181	75.4	74.8			
885	0.0000	3.81171443	14.4706254	0.97954908	14.34225	1989.25	1908.99778	74.6	74.3			
890	0.0000	3.82700002	14.4891051	0.97977152	14.34245	1992.0	1917.96355	74.8	74.3			
895	0.0000	3.83365456	14.4706254	0.97977152	14.340228	1989.25	1905.89176	74.9	74.3			
900	0.0000	3.83553469	14.4706254	0.980239996	14.3469	1989.25	1901.99163	74.6	74.9			
905	0.0000	3.84177338	14.4888757	0.980239996	14.3433	1979.5	1908.37511	73.8	74.3			
910	0.0000	3.84692757	14.4888757	0.97987152	14.342228	1978.75	1903.24627	74.9	74.9			
915	0.0000	3.83496942	14.4706254	0.97814908	14.34225	1979.5	1904.93076	74.6	74.3			
920	0.0000	3.8561309	14.4616299	0.97829978	14.3433	1979.25	1904.93076	74.8	74.3			
925	0.0000	3.89037603	14.48937603	0.97789963	14.342228	1979.0	1904.78704	74.6	74.9			
930	0.0000	3.85429878	14.4706254	0.97728876	14.34225	1989.0	1901.99163	74.4	74.3			
935	0.0000	3.797146032	14.4576269	0.975936344	14.34225	1979.0	1908.96114	74.8	74.3			
940	0.0000	3.83303361	14.48937603	0.97728876	14.342228	1978.25	1908.37511	74.9	74.3			
945	0.0000	3.81673338	14.471375	0.97814908	14.34225	1978.25	1905.29983	74.3	74.9			
950	0.0000	3.84653361	14.4706254	0.978598344	14.342228	1978.25	19					

TEST KW0272, 1, 2 May 1987 WMS-SPC01									
SECONDARY	MAIN DUCT	GAS INJECT	WATER	SMC (FPM)	AMBIENT	FLAMMABLE GAS	MAIN DUCT	UNIT CELL	UNIT CELL
DIFF IN H2	ABS (PSIA)	DIFF IN H2	ABS (PSIA)	OUTPUT (FPM)	TEMP (F)	GAS TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
805.01969	3.330352	14.46867	14.3415	1973.75	1892.4548	75.8	74.3	74.3	0.000515
805.01969	3.341787	14.46867	14.3415	1970	1892.4548	75.8	74.3	74.3	0.000514
810.06	3.330352	14.471376	14.3415	1970	1894.33524	75.8	73.9	74.3	0.000515
815.01969	3.330352	14.46867	14.3415	1969.75	1894.33524	75.8	73.9	74.3	0.000514
820.01969	3.330352	14.46867	14.3415	1969.75	1894.33524	75.8	73.9	74.3	0.000514
825.03	3.330352	14.46867	14.3415	1968.25	1894.33524	75.8	73.9	74.3	0.000515
830.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
835.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
840.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
845.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
850.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
855.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
860.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
865.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
870.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
875.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
880.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
885.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
890.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
895.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
900.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
905.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514

805.01969	3.330352	14.46867	14.3415	1973.75	1892.4548	75.8	74.3	74.3	0.000515
810.06	3.330352	14.471376	14.3415	1970	1892.4548	75.8	74.3	74.3	0.000514
815.01969	3.330352	14.46867	14.3415	1969.75	1894.33524	75.8	73.9	74.3	0.000515
820.01969	3.330352	14.46867	14.3415	1969.75	1894.33524	75.8	73.9	74.3	0.000514
825.03	3.330352	14.46867	14.3415	1968.25	1894.33524	75.8	73.9	74.3	0.000515
830.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
835.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
840.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
845.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
850.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
855.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
860.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
865.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
870.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
875.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
880.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
885.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
890.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
895.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
900.01969	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514
905.04001	3.330352	14.4706254	14.3415	1968.75	1894.33524	75.8	74	74.3	0.000514

Spot/Place Sensor Testing

TEST: K06572_2 \$ May 1997 WEC-SPOOL											
SECONDS	MAIN DUCT DRIF IN (H2 ABSS (PSIA)	MAIN DUCT GAS INJECT ABSS (PSIA)	WHITTAKER OUTPUT (PPHM)	WHITTAKER SAVE (PPHM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	BACK DUCT WHIT CELL TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL TEMP (F)
0.000762	3.94712735	14.533044	0.0002197	18.37	33.235	74.584438	74.8	74.3	74.1	74.8	0.000198
5.019689	3.79676726	14.5329851	1.6686348	14.41278	30.8	73.206452	74.7	74.1	74	74.6	0.000206
10.019689	3.51996294	14.532664	1.06766646	14.4135	104.625	76.410045	74.7	74.1	74	74.6	0.000206
15.019689	3.22020233	14.532906	1.06420592	14.4105	458.25	135.77296	74.7	74.3	74	74.6	0.000207
20.019689	3.63991159	14.5345432	1.6636903	14.4105	807.25	168.84643	74.7	74.3	74.8	74.6	0.000205
25.019689	3.26776317	14.5330044	1.06358046	14.40975	1356.5	188.725048	74.8	74.2	74	74.7	0.000205
30.019689	3.27113948	14.533084	1.06369504	14.41275	1335	195.277116	74.8	74.3	74.8	74.7	0.000204
35.019689	3.74927021	14.532884	1.66368048	14.40975	1484.6	207.94353	74.8	74.2	74	74.7	0.000204
40.019689	3.53246934	14.5320444	1.06358048	14.40975	1566.5	204.430	74.8	74.3	74	74.6	0.000205
45.019689	3.0002025	14.5326932	1.06369504	14.4115	1631	209.6164	74.8	74.3	74	74.6	0.000204
50.019689	3.09914025	14.5326932	1.06369504	14.40975	1689	206.83856	74.8	74.3	74	74.6	0.000204
55.019689	3.02740816	14.5320944	1.06358048	14.40975	1731.25	207.78817	74.8	74.3	74	74.6	0.000204
60.019689	3.53703237	14.5298458	1.0633296	14.4075	1792.35	208.218172	74.8	74.3	74.2	74.6	0.000204
65.019689	3.81927757	14.532844	1.66358048	14.4105	1803.75	208.3868	75	74.3	74.7	74.6	0.000204
70.019689	3.81927757	14.532844	1.66358048	14.40975	1807	212.16867	75	74.3	74.3	74.6	0.000204
75.019689	3.81927757	14.532844	1.66358048	14.40975	1839	211.21291	75.1	74.3	74.2	74.6	0.000204
80.019689	3.81927757	14.532844	1.66358048	14.40975	1843.25	211.348824	75.1	74.3	74.2	74.6	0.000204
85.019689	3.81927757	14.532844	1.66358048	14.4115	1855.5	212.162259	75.3	74.3	74.2	74.6	0.000204
90.019689	3.81927757	14.532844	1.66358048	14.4115	1868	212.32878	75.4	74.3	74.2	74.7	0.000204
95.019689	3.81927757	14.532844	1.66358048	14.40975	1882.5	212.33114	75.4	74.3	74.2	74.7	0.000204
100.019689	3.81927757	14.532844	1.66358048	14.4075	1891	212.69008	75.4	74.3	74.2	74.6	0.000204
105.019689	3.81927757	14.532844	1.66358048	14.40975	1903.5	212.569963	75.4	74.3	74.2	74.6	0.000204
110.019689	3.81927757	14.532844	1.66358048	14.4115	1915.75	213.317	75.6	74.4	74.2	74.6	0.000204
115.019689	3.81927757	14.532844	1.66358048	14.4115	1915.75	213.32833	75.6	74.4	74.3	74.6	0.000204
120.019689	3.81927757	14.532844	1.66358048	14.4075	1927.75	213.88398	75.6	74.4	74.3	74.6	0.000204
125.019689	3.81927757	14.532844	1.66358048	14.40975	1927.75	213.317	75.6	74.4	74.3	74.6	0.000204
130.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
135.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
140.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
145.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
150.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
155.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
160.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
165.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
170.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
175.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
180.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
185.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
190.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204
195.019689	3.81927757	14.532844	1.66358048	14.40975	1935.25	213.41707	75.6	74.4	74.3	74.7	0.000204

SpacePhone Sensor Testing

TEST: KIV5572_3_5 MAY 1957 WEC-SPOOL											
SECONDS	MAIN DUCT (AS INJECT)	ISAS INJECT	WHITTAKER (SAC (FRP))	AMBIENT	FLAMMABLE	MAIN DUCT WHIT CELL	WHIT CELL	TEMP (F)	TEMP (F)	TEMP (F)	WHIT (F)
OFF (H2)	MAIN DUCT (AS INJECT)	ISAS (PSIA)	DIFF (H2)	ASIS (PSIA)	DIFF (H2)	ASIS (PSIA)	DIFF (H2)	ASIS (PSIA)	DIFF (H2)	ASIS (PSIA)	DIFF (H2)
233.043993	3.20848038	14.53038981	1.06239554	14.43676	1.061585	2151.34293	75.3	74.5	74.1	74.2	0.000514
208.14898	3.81334226	14.5302745	1.0623286	14.437245	1.063148	2148.34877	75.1	74.5	74.1	74.8	0.000516
210.01898	3.84241256	14.5304455	1.06319348	14.4375	1.068124	2148.54877	75.1	74.5	74.1	74.7	0.000516
210.01909	3.80177011	14.5304885	1.06295504	14.4376	1.06735	2150.21244	75.2	74.5	74.1	74.8	0.000514
210.01909	3.85118541	14.5303544	1.06295504	14.4376	1.06735	2150.40071	75.2	74.5	74.1	74.7	0.000514
225.01909	3.81485824	14.5313447	1.06295504	14.4375	1.06735	2150.9832	75.3	74.5	74.2	74.7	0.000515
230.01909	3.84853385	14.5313447	1.06295504	14.4375	1.06735	2150.9832	75.3	74.5	74.3	74.8	0.000516
235.01909	3.83327525	14.5313447	1.06295504	14.4375	1.06735	2150.9832	75.3	74.5	74.3	74.8	0.000516
240.01909	3.84033685	14.5304455	1.06295504	14.4375	1.06735	2150.9832	75.3	74.5	74.3	74.8	0.000516
245.01909	3.85554117	14.5304455	1.06295504	14.4375	1.06735	2150.9832	75.3	74.5	74.3	74.8	0.000516
250.01909	3.84451374	14.5304455	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.7	0.000517
255.01909	3.83523148	14.5304455	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.7	0.000517
260.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.7	0.000517
265.01909	3.81827767	14.5304455	1.06295504	14.4375	1.06735	2151.34293	75.3	74.5	74.3	74.8	0.000518
270.01909	3.85543333	14.5304455	1.06295504	14.4375	1.06735	2151.34293	75.3	74.5	74.3	74.8	0.000518
275.01909	3.85543333	14.5304455	1.06295504	14.4375	1.06735	2151.34293	75.3	74.5	74.3	74.8	0.000518
280.01909	3.84853385	14.5304455	1.06295504	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000517
285.01909	3.84853385	14.5304455	1.06295504	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
290.01909	3.84853385	14.5304455	1.06295504	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
295.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
300.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
305.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
310.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
315.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
320.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
325.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
330.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
335.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
340.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
345.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
350.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
355.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
360.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
365.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
370.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
375.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
380.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
385.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
390.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
395.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518
400.01909	3.81334226	14.5302745	1.0623286	14.4375	1.06735	2151.34293	75.3	74.5	74.2	74.8	0.000518

TEST: KW5577_1_1 May 1997 REC-5700L												
SECONDS	RAIR DUCT DIFF IN/OUT	MAIN DUCT ABS (PSIA)	GAS HARDY DIFF (IN/IN)	GAS INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPM)	SMC (PPH)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIN DUCT TEMP (F)	WHY CELL TEMP (F)	WHY CELL VOLTS	
490.34999	1.474145	14.535991	1.481252	14.4075	2021.5	2152.3722	74.3	74.7	74.7	74.7	0.00582	
490.35000	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35001	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35002	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35003	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35004	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35005	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35006	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35007	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35008	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35009	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35010	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35011	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35012	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35013	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35014	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35015	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35016	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35017	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35018	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35019	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35020	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35021	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35022	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35023	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35024	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7	74.7	0.00582	
490.35025	1.474145	14.535991	1.481252	14.4075	2020.5	2150.3115	74.2	74.7	74.7			

TEST WARE#72.2 5 May 1987 WEC-SPECUL											
SEC#	MAIN DUCT	MAIN DUCT	GAS INJECT	WHITTAKER	SMC (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL		
	DIFF IN H2	ABS (PSIA)	DIFF IN H2	ABS (PSIA)	OUTPUT (PPM)	TEMP (F)	GAS TEMP (F)	TEMP (F)	TEMP (F)	VOLTS	
800.01696	3.841162.12	14.53513467	1.0992024	14.4046	3048.75	1147.48841	75.3	74.2	74.3	0.005363	
805.01808	3.81233887	14.5389455	1.0992024	14.4045	2048.75	2146.98563	75.3	74.2	74.3	0.005995	
810.04908	3.81990234	14.530985	1.0992024	14.4045	2048.75	2147.13874	75.4	74.3	74.3	0.005326	
815.01696	3.81426157	14.53315447	1.08710074	14.40325	2030.75	2145.44895	75.4	74.3	74.7	0.005326	
820.01808	3.82065672	14.5305951	1.08707872	14.40325	2090.75	2140.26138	75.4	74.3	74.8	0.005326	
825.03988	3.85179717	14.5309485	1.0932024	14.40325	2048.75	2153.54546	75.4	74.3	74.8	0.005326	
830.01696	3.80627354	14.5296958	1.0992024	14.4048	2048.75	2152.8888	75.4	74.4	74.7	0.005324	
835.01808	3.81365204	14.5299465	1.08657696	14.4045	2048.75	2148.77988	75.3	74.4	74.7	0.005324	
840.04908	3.80975523	14.5299485	1.0932024	14.4045	2045.25	2146.21693	75.4	74.3	74.3	0.005326	
845.07696	3.84677885	14.530365	1.0992024	14.40375	2045.5	2146.39247	75.4	74.2	74.3	0.005324	
850.01808	3.84533193	14.5305951	1.09927594	14.40325	2045.5	2146.03818	75.3	74.3	74.8	0.005324	
855.03988	3.82370834	14.5299383	1.09902794	14.40335	2047.25	2148.5359	75.4	75.2	74.4	0.005324	
860.01696	3.79676785	14.5283463	1.0992024	14.4045	2048.75	2144.16857	75.6	74.4	74.7	0.005324	
865.01808	3.81302487	14.5305951	1.08657696	14.40325	2048.25	2144.21013	75.5	74.3	74.7	0.005324	
870.12957	3.82427893	14.5296958	1.0932024	14.4045	2048.75	2144.57616	75.5	74.8	74.7	0.005344	
875.01808	3.84941385	14.5305951	1.09682784	14.4045	2049.75	2145.36769	75.6	74.5	74.7	0.005338	
880.01808	3.79436332	14.5305951	1.09530204	14.40325	2046.5	2143.37435	75.6	74.8	74.8	0.005324	
885.01808	3.83116644	14.5296958	1.09927594	14.4045	2048.75	2144.42287	75.6	74.5	74.2	0.005324	
890.10929	3.82177775	14.5313457	1.08657696	14.40335	2049.75	2147.48841	75.6	74.5	74.7	0.005324	
895.01808	3.80684838	14.5305951	1.09530204	14.40325	2047.25	2143.511	75.6	74.8	74.8	0.005326	
900.06	3.86064548	14.5299485	1.0992024	14.4045	2050.5	2146.011	75.7	74.6	74.7	0.005336	

80% of 15 min value

100% - SMC

134.1 133.7 42.55 19.53

Is 2 min value >85% ?

Y/N

SMC

TEST: RW5752 3 May 1997 WPT-5P-021

SECONDARY MAIN DUCT	MAIN DUCT	GAS INJECT	GAS INJECT	WHITAKER	SMC (PPH)	ADJUSTED FLAMMABLE	MAIN DUCT	WHITAKER	WHIT CELL
DIFF (IN 100)	ABS (PSIA)	DIFF (IN 100)	ABS (PSIA)	OUTPUT (PPH)	TEMP (°F)	GAS TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)
1.0300185	3.75877007	14.53875483	14.53875483	3.3	7.52148	75.3	75.4	74.8	0.000238
5.0200182	3.75862134	14.52455831	14.490815	4.375	7.7170795	75.5	75.4	74.6	0.000267
10.020002	3.75842391	14.51313447	14.40735	132.06	485.18352	75.4	74.6	74.6	0.000243
15.020007	3.74664363	14.52869724	14.46135	504.78	1150.26458	75.4	74.6	74.6	0.000303
20.020002	3.77488235	14.5283483	14.40735	580	1580.87187	75.4	74.6	74.6	0.000359
25.020002	3.77881784	14.52455831	14.40735	1170.25	1804.28111	75.4	74.4	75.1	0.0004
30.020002	3.75466491	14.52964585	14.40675	1365.25	1813.78737	75.3	74.4	75.1	0.000429
35.020002	3.74284473	14.528647	14.40675	1502.25	1977.11653	75.3	74.4	75.1	0.000448
40.020002	3.7488737	14.5293463	14.40735	1615.5	2012.88724	75.3	74.4	75.1	0.000465
45.020002	3.75739026	14.528647	14.40735	1801	2038.2413	75.3	74.4	75.1	0.000475
50.020002	3.75525607	14.5305851	14.40735	1740.75	2048.18054	75.2	74.4	75.1	0.000481
55.020002	3.7488737	14.52964585	14.40735	1789	2060.8707	75.2	74.4	74.8	0.000487
60.020002	3.7488737	14.52964585	14.40675	1817.5	2083.32988	75.3	74.4	74.1	0.000491
65.020002	3.75727594	14.5286458	14.40735	1841.35	2076.32643	75.4	74.4	74.8	0.000496
70.020002	3.77738458	14.5286458	14.40675	1817.5	2076.32643	75.4	74.4	74.8	0.000498
75.020002	3.75237378	14.5286458	14.40675	1866.5	2081.88880	75.3	74.4	74.8	0.000501
80.020002	3.74771702	14.5278665	14.40675	1892	2088.38035	75.4	74.4	74.8	0.000504
85.020002	3.75887702	14.5280374	14.40675	1816.5	2107.03828	75.3	74.4	74.8	0.000506
90.020002	3.75301201	14.5278665	14.40735	1933.5	2103.41587	75.3	74.4	74.8	0.000506
95.020002	3.75875496	14.5280374	14.40675	1939.25	2108.12898	75.3	74.4	74.8	0.000506
100.020002	3.7581354	14.5280374	14.40675	1948.25	2115.07514	75.3	74.4	74.8	0.000511
105.020002	3.75714551	14.5280374	14.40675	1957.75	2117.51188	75.4	74.4	74.8	0.000512
110.020002	3.75714551	14.5280374	14.40675	1969.5	2117.51188	75.4	74.4	74.8	0.000512
115.020002	3.75714551	14.5280374	14.40675	1971.75	2117.51188	75.3	74.4	74.8	0.000514
120.020002	3.75237378	14.5280374	14.40675	1987	2121.88881	75.5	74.4	74.8	0.000516
125.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
130.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
135.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
140.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
145.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
150.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
155.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
160.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
165.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
170.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
175.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
180.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
185.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
190.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
195.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
200.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
205.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
210.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
215.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
220.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
225.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
230.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
235.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
240.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
245.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
250.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
255.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
260.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
265.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
270.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
275.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
280.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
285.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
290.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
295.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
300.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
305.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
310.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
315.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
320.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
325.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
330.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
335.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
340.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
345.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
350.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
355.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
360.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
365.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
370.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
375.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
380.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
385.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
390.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
395.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
400.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
405.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
410.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
415.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
420.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
425.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
430.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
435.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
440.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
445.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
450.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
455.020002	3.75237378	14.5280374	14.40675	1988.5	2122.1355	75.5	74.4	74.8	0.000516
460.020002	3.75237378	14.5280374	14.406						

Spot/Place Sensor Testing

TEST: KIM572_3_5 May 1987 WEC-SPON											
SECONDS	MAIN DELT	MAIN DUCT	GAS IN/OUT	GAS IN/OUT	WHITTAKER	SMC (PPHM)	AMBIENT TEMP (°F)	FLAMMABLE GAS TEMP (°F)	MAIN INST. TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL VOLTS
235.02002	3.87377515	14.52349485	1.83882764	14.40225	2037.75	2202.08924	75.1	75.4	74.2	75	0.005319
236.02002	3.84241286	14.5235478	1.06107872	14.40225	2016	2202.21514	75	75.4	74.1	75	0.00532
237.02002	3.83050164	14.5235478	1.06107872	14.40225	2015	2201.3166	74.9	75.4	74.2	75	0.00532
238.02002	3.83815666	14.5235478	1.06107872	14.40225	2018.15	2212.65363	74.5	75.4	73.1	75	0.00532
239.02002	3.83344228	14.5235478	1.06107872	14.4016	2019.75	2211.5776	74.7	75.4	73.1	75	0.00532
240.02002	3.84741405	14.5235478	1.06045176	14.403	2021	2208.44626	74.7	75.4	74	75	0.005318
241.02002	3.85481506	14.5235478	1.06107872	14.403	2021.75	2202.38915	74.7	75.4	74	75	0.00532
242.02002	3.85453037	14.5235478	1.06107872	14.40328	2021	2203.8031	74.8	75.4	74.1	75	0.00532
243.02002	3.85175171	14.5235478	1.06045176	14.4025	2020.75	2202.86403	74.7	75.4	74.1	75.1	0.00532
244.02002	3.85517262	14.5235478	1.06107872	14.403	2021.25	2201.83395	74.5	75.4	74.1	75	0.00532
245.02002	3.84695308	14.5235478	1.06107872	14.4016	2022.25	2201.83395	74.7	75.4	74.1	75	0.00532
246.02002	3.84241286	14.5235478	1.06107872	14.403	2022.75	2208.7537	74.7	75.4	74.1	74.8	0.00532
247.02002	3.84481574	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
248.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
249.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
250.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
251.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
252.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
253.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
254.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
255.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
256.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
257.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
258.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
259.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
260.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
261.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
262.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
263.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
264.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
265.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
266.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
267.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
268.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
269.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
270.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
271.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
272.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
273.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
274.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
275.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
276.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
277.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
278.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
279.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
280.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
281.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
282.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
283.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
284.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
285.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
286.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
287.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
288.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
289.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
290.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
291.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
292.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
293.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
294.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
295.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
296.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
297.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
298.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
299.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532
300.02002	3.85303089	14.5235478	1.06107872	14.403	2023.25	2208.7537	74.7	75.4	74.1	74.8	0.00532

Mathematics

TEST # W45522_3 3 May 1997 WEC SCHOOL										
RECORD#	MAIN DUCT DIFF IN (IN) ABS (PSIA)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF IN (IN) ABS (PSIA)	WHITENER OUTPUT (PPM)	SAC (PPM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIN DUCT TEMP (F)	WHY CELL TEMP (F)	WHY CELL (VOLTS)
400 33002	3.5334.0034	1.8813343	14.40075	2003.75	2173.8463	74.6	75.4	73.9	74.8	0.00393
405 33002	3.67180035	1.63533478	14.40074	2002.5	2173.5406	74.5	75.4	73.8	74.8	0.00356
410 33002	3.64863935	1.43230488	14.40225	2002.5	2173.8406	74.5	75.4	73.8	74.8	0.00352
415 33002	3.58792498	1.45253474	14.40225	2002.5	2187.48942	74.5	75.4	73.8	74.8	0.00352
420 33002	3.62351821	1.45223463	14.39825	2003.75	2188.00001	74.5	75.4	73.8	74.8	0.00352
425 33002	3.66118644	1.45223463	14.40024	2003.75	2169.82716	74.5	75.4	73.8	74.8	0.00352
430 33002	3.58542384	1.45234584	14.40225	2003.25	2173.88014	74.3	75.4	73.6	74.8	0.00352
435 33002	3.5743267	1.45336981	14.40225	2003.75	2185.88536	74.3	75.4	73.6	74.8	0.00352
440 33002	3.68934773	1.45234484	14.40216	2003.25	2165.18276	74.3	75.4	73.7	74.8	0.00352
445 33002	3.65934873	1.45245688	14.40225	2003.75	2169.28548	74.3	75.3	73.8	74.8	0.00352
450 33002	3.65554033	1.45223463	14.40225	2003.25	2166.15748	74.3	75.3	73.7	74.8	0.00352
455 33002	3.66119171	1.45223463	14.39825	2003.5	2165.18276	74.3	75.3	73.7	74.8	0.00352
460 33002	3.64241906	1.45234484	14.40072	2003.75	2168.00001	74.1	75.3	73.8	74.8	0.00352
465 33002	3.64031102	1.45334718	14.40115	2003.75	2173.51532	74.1	75.3	73.7	74.8	0.00352
470 33002	3.68663316	1.45293478	14.40035	2004.75	2168.00001	74.1	75.3	73.8	74.8	0.00352
475 33002	3.65330425	1.45233488	14.40225	2004.25	2166.18763	74.1	75.3	73.8	74.8	0.00352
480 33002	3.669674	1.45253478	14.40072	2003.75	2169.82716	74.1	75.3	73.8	74.8	0.00352
485 33002	3.64241906	1.45234484	14.39825	2003.5	2168.77606	74.1	75.3	73.8	74.8	0.00352
490 33002	3.67342502	1.45334905	14.39825	2003.75	2165.18276	74.2	75.3	73.9	74.8	0.00352
495 33002	3.64031102	1.45233488	14.39825	2004.75	2169.82716	74.2	75.3	73.9	74.8	0.00352
500 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
505 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
510 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
515 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
520 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
525 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
530 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
535 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
540 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
545 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
550 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
555 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
560 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
565 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
570 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
575 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
580 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
585 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
590 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352
595 33002	3.64031102	1.45233488	14.40072	2003.5	2169.82716	74.2	75.3	73.9	74.8	0.00352

Specific Sensor Testing

TEST: K05572_2_5 May 1987 WEL-SPCCL									
SECONDS	MAIN INLET	MAIN OUTLET	GAS INLET	WHITAKER	SNC (PSIA)	APPROX TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIN FLOW TEMP (F)	VENT CELL TEMP (F)
DIFF (IN H2O)	ABS (PSIA)	DIFF (IN H2O)	ABS (PSIA)	OUTPUT (PSIA)					OCCLTS
800 12002	3.85932522	14.52159987	1.0682034	14.40075	2054.217827688	73.3	73.3	74.8	0.005527
805 12001	3.87800355	14.52159987	1.0682034	14.40075	2054.5217415306	73.3	73.3	74.7	0.005528
810 12002	3.88348834	14.52159987	1.0682034	14.4	2056.217247761	73.7	75.2	74.8	0.005527
815 08	3.88348834	14.52159987	1.0682034	14.40075	2057.7521747030	73.7	75.3	74.6	0.005528
820 08	3.84988838	14.52159987	1.0682034	14.40075	2057.217246402	73.7	75.3	74.8	0.005528
825 05002	3.84303789	14.52159987	1.06845328	14.4	2055.2521708608	73.7	75.3	74.8	0.005528
830 08	3.84303789	14.52159987	1.06845328	14.4	2055.2521708608	73.7	75.3	74.7	0.005527
835 08	3.84620603	14.52096	1.06845328	14.4	2054.5217826381	73.9	75.2	74.9	0.005527
840 05002	3.84741495	14.52159987	1.0682034	14.4	2054.217742883	73.8	75.2	74.9	0.005528
845 05002	3.84303789	14.5224503	1.06845328	14.39925	2055.2521708608	73.9	75.3	75	0.005527
850 08	3.86838873	14.5201004	1.06107872	14.39925	2056.217247761	73.9	75.3	74.8	0.005528
855 05002	3.84988838	14.52159987	1.0682034	14.40075	2056.217486568	73.8	75.3	74.8	0.005528
860 08	3.85932522	14.5201004	1.06045328	14.4	2055.5217281532	73.9	75.3	74.6	0.005528
865 08	3.84988838	14.52159987	1.0682034	14.39925	2056.216877686	73.9	75.2	74.9	0.005528
870 05002	3.87817724	14.52096	1.0682034	14.39925	2059.2185953075	74	75.2	75	0.005527
875 05001	3.86517292	14.5201004	1.06045328	14.397	2056.252168819807	74.1	75.2	74.8	0.005528
880 05002	3.86433711	14.5233493	1.0682034	14.39925	2055.752168277617	74.2	75.2	73.7	0.005527
885 05002	3.86048773	14.52159987	1.06045328	14.39925	2055.752171333564	74.3	75.2	75	0.005527
890 08	3.85985495	14.52159987	1.06107872	14.39925	2055.752171333564	74.3	75.2	74.9	0.005527
895 05002	3.85544333	14.52159987	1.06107872	14.39925	2056.7521708608	74.1	75.2	74.9	0.005527
900 12002	3.87189035	14.52159987	1.0682034	14.39925	2055.5217133364	74	75.3	74.6	0.005527

100% OF 10 min value	10 2 min value - 80% ?
WEL	WEL
SNC	SNC
145.95	1954.20045
PASS	PASS

0045-2344(200109)2:39:2:1-531

TEST: 15.27.27_08_2 May 1987 WEL-SPFOOL										
SECONDS	MAIN DUCT DIFF IN (ABS) PSIA	MAIN DUCT ABS (PSIA)	MAIN DUCT GAS INJECT DIFF IN (ABS) PSIA	WYRTAKER OUTPUT (PPM)	SAC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHY CELL TEMP (F)	WHY CELL OUTPUT (VOLTS)
600.00	2.4311578	14.4733943	1.91545076	3882.25	3892.54794	74.8	74.5	73.5	73.8	0.000808
605.016986	3.026234568	14.4781218	1.503188165	3880.76	3891.52206	74.8	74.5	73.7	73.6	0.000818
610.03	3.034278852	14.47836127	1.502368446	3878.95	3882.519377	74.7	74.5	73.6	74	0.000801
615.016989	3.797193552	14.47793827	1.8234388	3883	3894.53823	74.6	74.5	73.6	74	0.000881
620.016986	3.387387754	14.4781218	1.502938355	3884.3	3864.519133	74.8	74.5	73.5	74	0.000803
625.041989	2.903551174	14.47856712	1.327356568	3883.29	3885.07718	74.8	74.6	73.4	74	0.000803
630.10001	3.41233937	14.4783827	1.92738888	3886.75	3894.89075	74.5	74.5	73.5	74	0.000803
635.016986	3.02688655	14.4781218	1.5038984	3880.5	3883.91143	74.5	74.5	73.4	74	0.000803
640.08	3.628251198	14.47433738	1.822697435	3885.75	3887.18287	74.5	74.5	73.4	74	0.000807
645.016989	3.645195928	14.47538727	1.929393488	3883	3892.549882	74.5	74.6	73.3	74	0.000808
650.016989	3.784887832	14.47823742	1.929381485	3817.55	3893.86167	74.5	74.6	73.3	74	0.000808
655.05	3.45420581	14.477332	1.829084488	3818.5	3888.68481	74.4	74.5	73.3	73.9	0.000808
660.016986	3.581155488	14.4788711	1.929884488	3818.5	3888.68481	74.4	74.6	73.3	74	0.000808
665.016986	3.33853458	14.4789712	1.82231884	3825.5	3888.68481	74.1	74.8	73.3	74	0.000808
670.08	3.33853458	14.4781218	1.92984948	3825.5	3888.68481	74.4	74.8	73.3	73.9	0.000808
675.016986	3.847193552	14.47538727	1.927356568	3825.5	3888.68481	74.4	74.8	73.3	73.9	0.000808
680.016989	3.84851931	14.4781218	1.92721864	3825.5	3888.68481	74.5	74.6	73.3	74	0.000808
685.035966	3.63879291	14.4781218	1.93231864	3825.5	3888.68481	74.7	74.6	73.5	74	0.000808
690.016986	3.85354658	14.477127	1.93231864	3825.5	3888.68481	74.7	74.6	73.5	74	0.000808
695.01989	3.4165388	14.47589717	1.82221864	3825.5	3888.68481	74.7	74.6	73.5	74	0.000808
700.01989	3.03855252	14.4788712	1.82221864	3825.5	3888.68481	74.8	74.9	73.6	74	0.000808
705.01989	3.03855252	14.4788712	1.82221864	3825.5	3888.68481	74.8	74.8	73.6	74	0.00081
710.01989	3.03855252	14.4788712	1.82221864	3825.5	3888.68481	74.7	74.8	73.5	74	0.00081
715.03	3.85353458	14.4751131	1.93231864	3825.5	3888.68481	74.6	74.6	73.5	73.9	0.00081
720.10001	3.03178397	14.4751131	1.93231864	3825.5	3888.68481	74.6	74.8	73.6	74	0.000809
725.01989	3.4165388	14.4788712	1.82221864	3825.5	3888.68481	74.5	74.9	73.6	74	0.000808
730.01989	3.03855252	14.4788712	1.82221864	3825.5	3888.68481	74.5	74.7	73.6	74	0.000808
735.01989	3.03855252	14.4788712	1.82221864	3825.5	3888.68481	74.5	74.7	73.6	74	0.000808
740.01989	3.784887832	14.47823742	1.929381485	3817.55	3893.86167	74.5	74.7	73.6	74	0.000808
745.03	3.02688655	14.4781218	1.5038984	3880.5	3883.91143	74.5	74.7	73.5	74	0.000808
750.016986	3.03092281	14.4769273	1.9316912	3840	3893.52206	74.6	74.7	73.7	74	0.000809
755.01989	3.811978	14.47589717	1.829084488	3840.75	3892.549882	74.5	74.7	73.7	74	0.00081
760.031001	3.811978	14.47589717	1.829084488	3840.75	3892.549882	74.5	74.7	73.7	74	0.00081
765.01989	3.784887832	14.47823742	1.929381485	3817.55	3893.86167	74.5	74.7	73.6	74	0.000808
770.01989	3.77428873	14.47823742	1.929381485	3817.55	3893.86167	74.5	74.7	73.6	74	0.000808
775.03	3.94818428	14.4751131	1.93040032	3828	3893.26396	74.5	74.7	73.7	74	0.000809
780.016986	3.63853458	14.4761218	1.92984948	3825.5	3888.68481	74.8	74.7	73.7	74	0.000809
785.016986	3.22544442	14.4781218	1.53108536	3841	3870.28845	74.5	74.7	73.7	74	0.00081
790.08	3.61279307	14.4781218	1.92984948	3841	3870.28845	74.5	74.7	73.7	74	0.00081
795.016986	3.61279307	14.4781218	1.92984948	3841	3870.28845	74.5	74.7	73.7	74	0.00081

Speed/Place Sensor Feeding

TEST N3272_AB 2 May 1997 MEC-SPOOL									
SECONDS	MAIN DUCT	MAIN DUCT	GAS SUBJECT	GAS INJECT	WHITENER	SAC (PPM)	AMBIENT FLAMMABLE	MAIN DUCT UNIT CELL	UNIT CELL
	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)
820.01998	3.78812872	14.4735238	1.928564	14.40875	3841.75	3973.0159	74.9	73.7	74
835.04998	3.78926471	14.4735238	1.92758564	14.40875	3842.75	3967.7695	74.8	73.7	74
850.07998	3.79115548	14.4735238	1.928564	14.40875	3842.75	3972.8314	74.7	73.6	74
865.01998	3.81302497	14.4751231	1.92792564	14.40875	3845	3973.0020	74.5	73.7	73.8
880.04998	3.81002386	14.4735238	1.928564	14.40875	3844	3977.781	74.8	73.6	74
895.07998	3.82802291	14.4735238	1.928564	14.40875	3844.25	3967.86179	74.8	73.7	74
910.01998	3.81817659	14.4735238	1.928564	14.40875	3842.25	3967.7055	74.8	73.7	74
925.04998	3.81827767	14.4735238	1.92758564	14.40875	3844.75	3967.4482	74.8	73.6	74
940.07998	3.83177011	14.4735238	1.928564	14.40875	3841.75	3975.28194	75	73.7	74
955.01998	3.80339538	14.4735238	1.928564	14.40875	3840.25	3972.8314	75	73.7	74
970.04998	3.78114692	14.4735238	1.928564	14.40875	3838.75	3973.5274	75.1	73.6	74
985.07998	3.82848808	14.4735238	1.928564	14.40875	3837	3965.75596	75.2	73.7	73.9
1000.01998	3.808147	14.4735238	1.928564	14.40875	3834	3968.3768	75.1	73.7	74
1015.04998	3.83400842	14.4735238	1.928564	14.40875	3834	3968.6697	75.1	73.5	74
1030.07998	3.83177011	14.4735238	1.92758564	14.40875	3834.25	3968.16173	75.1	73.5	74
1045.01998	3.8117011	14.4735238	1.928564	14.40875	3834.25	3971.23663	74.2	73.3	74
1060.04998	3.8117011	14.4735238	1.928564	14.40875	3838	3973.0020	75	73.3	74
1075.07998	3.82339538	14.4735238	1.928564	14.40875	3835.75	3973.0020	75	73.3	74
1090.01998	3.8117011	14.4735238	1.928564	14.40875	3835	3967.18281	74.9	73.5	74
1105.04998	3.8117011	14.4735238	1.928564	14.40875	3834.25	3968.43492	75	73.6	74
1120.07998	3.80802281	14.4751231	1.928564	14.40875	3834.25	3968.5796	75	73.7	74

END OF 11 min value

3.7 min value 100% ?

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Engineering Testing Laboratory 303 Bag

SpeedSpace Server Testing

TEST KMS72, J. 5 May 1987 WED-3F003									
SECONDS	MAIN DUCT DIFF IN H2O ASS (PSIA)	MAIN DUCT DIFF IN H2O ASS (PSIA)	GAS INJECT DIFF IN H2O ASS (PSIA)	WHITTAKER OUTPUT (MMWG)	SAC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL VOL (%)
0.010000	3.86533338	14.166012	14.343	14.476	7.14515	75.1	74.9	74.2	74.7
5.030135	3.87680261	14.1578515	14.443	13.778	7.742709	75.2	74.9	74.3	74.5
15.030002	3.90493968	14.5193568	14.442	290.4	13.3332665	75.3	74.9	74.3	74.5
15.030002	3.91869806	14.5166012	14.442	885.33	25.0734818	75.3	74.9	74.3	74.5
25.030002	3.92669992	14.5193508	14.44275	1523.78	31.6012448	75.3	75	74.3	74.8
25.030002	3.95305627	14.5185013	14.442	1981.5	34.4438686	75.4	74.9	74.3	74.7
35.030002	3.9936644	14.5191019	14.442	2337.5	36.9385148	75.4	75	74.3	74.8
35.030002	3.97817134	14.5201004	14.443	2603.78	39.7040333	75.4	75	74.4	74.7
45.030002	3.92999948	14.5185568	14.442	2772.25	31.90125942	75.4	75	74.3	74.6
45.030002	3.88860737	14.5193508	14.44275	2828.35	37.29388374	75.5	75	74.4	74.8
55.030002	3.90819802	14.5201004	14.443	3003	37.44834218	75.5	75	74.4	74.6
55.030002	3.93244834	14.5185987	14.44325	3050.35	37.6574653	75.5	75	74.5	74.8
65.030002	3.7968943	14.5183508	14.4435	3125.5	37.66513592	75.5	75	74.5	74.8
65.030002	3.77660871	14.5211004	14.44725	3177.5	37.86418828	75.4	75	74.8	74.6
75.030002	3.77236346	14.5185012	14.445	3228.35	39.70182396	75.4	75	74.5	74.8
85.030002	3.79864376	14.5201004	14.44325	3273.78	36.52125644	75.4	75	74.8	74.7
85.030002	3.81052289	14.522493	14.448	3347.35	38.4835353	75.4	75	74.8	74.7
95.030002	3.82177875	14.5201004	14.4435	3376	39.65313714	75.4	75	74.4	74.7
100.030002	3.87418548	14.5185012	14.44725	3397	38.7153887	75.3	75	74.4	74.8
105.030002	3.78581308	14.5178515	14.44725	3412	38.6928832	75.4	75.1	74.4	74.8
110.030002	3.79576789	14.5215987	14.44725	3428.29	38.7338884	75.3	75.1	74.4	74.8
115.030002	3.81827787	14.5234483	14.4475	3458.35	38.7415782	75.4	75.1	74.4	74.8
120.030002	3.78081836	14.5185012	14.44725	3463.5	38.8287165	75.5	75.1	74.4	74.8
125.030002	3.8240834	14.523493	14.4475	3469.35	38.96878257	75.4	75.1	74.4	74.8
130.030002	3.84678855	14.5185012	14.4475	3478.75	38.9491772	75.4	75.1	74.5	74.8
135.030002	3.8954333	14.5178515	14.4475	3481	39.0545099	75.4	75.1	74.5	74.8
140.030002	3.8757816	14.5193508	14.442	3487	39.2235387	75.4	75.1	74.5	74.8
145.030002	3.86512233	14.5193508	14.442	3487.5	39.183319	75.4	75.1	74.5	74.8
150.030002	3.87442662	14.5201004	14.4475	3486.75	39.0521988	75.3	75.2	74.5	74.8
155.030002	3.87859306	14.5193508	14.442	3489.5	39.0518211	75.4	75.2	74.5	74.8
160.030002	3.91431438	14.5201004	14.443	3487	38.73114856	75.4	75.2	74.5	74.8
165.030002	3.902871847	14.5193508	14.4435	3487.5	39.1503945	75.5	75.3	74.5	74.8
170.030002	3.9181331	14.5178515	14.4435	3486.75	38.8238755	75.5	75.3	74.5	74.8
175.030002	3.88356653	14.5185012	14.4475	3489.35	39.0326276	75.5	75.3	74.8	74.8
180.030002	3.94413152	14.5185012	14.4435	3489.5	39.2626585	75.6	75.3	74.8	74.8
185.030002	3.97817724	14.5185012	14.4405	3489.75	39.3772148	75.5	75.3	74.7	74.8
190.030002	3.86426711	14.5193508	14.4435	3483.95	38.82311077	75.6	75.3	74.8	74.7
195.030002	3.95937184	14.5185012	14.44725	3485	39.2439154	75.7	75.4	74.7	74.6

Specialized Sensor Testing

TEST NUMBER	MAIN DUCT	MAIN DUCT	GAS INJECT	WHITTAKER	SMC (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL	WHIT CELL
	DIFF. IN H2O ABS. (PSIA)	DIFF. IN H2O ABS. (PSIA)	ABS. (PSIA)	OUTPUT (PPM)		TEMP. (F)	TEMP. (F)	TEMP. (F)	TEMP. (F)	(VOLTS)
SECONDS										
400.02002	3.87540634	14.32130533	1.98658992	3492	3646.48337	75.9	75.8	74.8	74.8	0.000764
410.04001	3.86917282	14.32131004	1.98658993	3609.78	3548.5456	75.9	75.8	74.8	74.8	0.000764
415.07002	3.87180036	14.32131506	1.98658992	3689.5	3551.0262	75.9	75.8	74.8	74.8	0.000765
415.07003	3.87181914	14.32201004	1.98658984	3689.5	3549.2526	75.9	75.8	74.8	74.8	0.000765
420.02002	3.86429711	14.3182808	1.98658993	3689.78	3550.7503	75.7	75.8	74.8	74.8	0.000765
425.04001	3.86556639	14.3201004	1.98658993	3690.75	3556.47866	75.6	75.8	74.8	74.8	0.000763
430.02002	3.86979619	14.31985012	1.98658993	3690.75	3564.32586	75.8	75.8	74.8	74.8	0.000764
435.07001	3.86979819	14.3193806	1.98658993	3690.75	3563.80478	75.8	75.8	74.8	74.8	0.000765
440.02002	3.86742346	14.31701016	1.98658993	3690.75	3560.11565	75.7	75.8	74.8	74.8	0.000765
445.02002	3.86588033	14.31985012	1.98658993	3690.75	3564.58077	75.7	75.8	74.8	74.8	0.000764
450.02002	3.86467597	14.32011004	1.98658993	3690.75	3560.54722	75.8	75.8	74.8	74.8	0.000765
455.02002	3.86594333	14.3193806	1.98658993	3690.75	3563.41233	75.8	75.8	74.8	74.8	0.000766
460.02002	3.86516895	14.31715016	1.98658993	3690.75	3560.32624	75.8	75.7	74.8	74.8	0.000766
465.02002	3.86342426	14.3193806	1.98658993	3690.75	3564.27168	75.9	75.8	74.8	74.8	0.000766
470.02002	3.86491866	14.3153006	1.98658993	3690.75	3568.48337	75.7	75.8	74.8	74.8	0.000766
475.02002	3.86580251	14.3193806	1.98658993	3690.75	3564.27168	75.8	75.8	74.8	74.8	0.000766
480.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
485.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
490.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
495.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
500.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
505.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
510.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
515.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
520.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
525.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
530.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
535.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
540.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
545.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
550.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
555.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
560.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
565.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
570.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
575.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
580.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
585.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
590.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
595.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766
600.02002	3.86580251	14.32011004	1.98658993	3690.75	3563.33672	75.8	75.8	74.8	74.8	0.000766

TEST: KXMS752.5_5 May 1997 WEC-SP002												
SECONDS	MAIN DUCT DIFF (IN H2O ABS PSIA)	MAIN DUCT ABS (PSIA)	DIFF (IN H2O ABS PSIA)	GAS INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPM)	SMAC (PPM)	AMBIENT TEMP (F)	PLUMBABLE GAS TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS	
600.33	3.94815426	14.5201104	1.88228144	14.442	3634.5	3361.76533	75.9	75.1	74.9	74.7	0.000777	
605.34001	3.9311576	14.5301004	1.88228144	14.4276	3633.25	3657.4597	76	76.2	74.8	74.8	0.000777	
610.02035	3.86481505	14.51989312	1.88228144	14.447	3635.75	3649.50855	76	76.2	74.9	74.7	0.000772	
615.01513	3.83178307	14.5201104	1.881856	14.442	3639.25	3633.76934	75.8	75.2	74.8	74.8	0.000772	
620.01298	3.84241258	14.53095	1.881856	14.442	3646.25	3691.06632	76	76.2	74.8	74.8	0.000772	
625.02605	3.844303763	14.5201104	1.88103556	14.44376	3645.5	3698.76035	76.9	76.2	74.8	74.8	0.000773	
630.02020	3.83991157	14.5201104	1.891856	14.42076	3640.25	3664.11747	76	76.2	74.9	74.9	0.000773	
635.02020	3.80877727	14.5201104	1.88103556	14.4276	3641	3372.8314	76	76.2	75	74.9	0.000772	
640.02029	3.83537665	1.88228144	14.4376	3639.75	3671.54982	76	76	76.3	74.9	75	0.000773	
645.07001	3.83959504	14.52095	1.881856	14.4425	3638.5	3372.8314	75.9	76.3	74.8	75	0.000773	
650.02020	3.83959504	14.52095	1.881856	14.4425	3640.25	3698.93681	75.8	76.3	74.8	74.8	0.000773	
655.02020	3.81627767	14.5201104	1.88103556	14.443	3640.75	3661.08219	75.8	76.2	74.9	74.7	0.000773	
660.04001	3.81771011	14.5201104	1.89103556	14.443	3642.5	3671.10261	76.2	76.2	74.9	74.9	0.000772	
665.02020	3.83340634	14.52095	1.89103556	14.44276	3642	3397.56175	75.9	76.1	74.8	74.7	0.000772	
670.02020	3.84241258	14.51989312	1.88103556	14.447	3640.25	3684.02988	75.8	76.3	74.8	74.8	0.000773	
675.03001	3.98817790	14.5201104	1.881856	14.4276	3644.5	3693.60478	75.5	76.3	74.8	74.8	0.000774	
680.02020	3.86678616	14.5201104	1.89103556	14.4435	3647.5	3698.65354	75.5	76.3	74.9	74.7	0.000773	
685.02020	3.84241258	14.517015	1.88103556	14.443	3649	3665.24327	75.8	76.3	74.9	74.7	0.000774	
690.02020	3.78031849	14.52095	1.89103556	14.44276	3642.25	3655.14355	75.5	76.1	74.9	74.9	0.000774	
695.02020	3.85544533	14.52095	1.891856	14.44376	3644.5	3668.25327	75.7	76.3	74.9	74.9	0.000774	
700.02020	3.83115776	14.5201104	1.89103556	14.44276	3641	3684.98635	75.7	76.3	74.8	74.9	0.000773	
705.02020	3.84681859	14.52095	1.881856	14.442	3639.5	3698.42402	75.7	76.1	74.8	74.8	0.000772	
710.02020	3.84333763	14.5201104	1.88228144	14.44376	3640.75	3696.17327	75.8	76.3	74.8	74.8	0.000772	
715.02020	3.85426415	14.51989312	1.881856	14.44276	3641.75	3664.11737	75.9	76.3	74.8	74.9	0.000774	
720.02020	3.8581986	14.5301004	1.89103556	14.44276	3643.75	3691.33813	76.9	76.4	74.9	74.7	0.000773	
725.02020	3.83039291	14.51989312	1.88228144	14.443	3644.75	3663.86137	76.5	76.4	74.9	74.8	0.000773	
730.02020	3.84333765	14.5201104	1.891856	14.442	3644.5	3668.68032	76.9	76.3	74.8	74.7	0.000772	
735.03	3.91385254	14.51989312	1.89228144	14.442	3644.75	3693.34948	76.9	76.4	74.9	75	0.000774	
740.02020	3.86678616	14.51989312	1.881856	14.44276	3645.5	3687.4382	75.8	76.4	75	74.9	0.000774	
745.02020	3.86979523	14.51989312	1.881856	14.44276	3646.5	3695.76035	76.9	76.4	74.8	75	0.000774	
750.02020	3.84834026	14.5201104	1.88103556	14.443	3652.5	3645.40793	76.5	76.4	74.9	74.8	0.000776	
755.02020	3.84834026	14.5201104	1.88103556	14.4435	3653.75	3645.62042	76.5	76.4	74.9	74.8	0.000776	
760.02020	3.86679315	14.5201104	1.89103556	14.44325	3656.5	3625.11017	76.9	76.4	74.8	74.8	0.000776	
765.03	3.84697315	14.5201104	1.881856	14.4428	3654.75	3693.82204	76.9	76.4	74.9	74.9	0.000776	
770.02020	3.81493078	14.51989312	1.881856	14.4425	3651.75	3693.69427	76	76.5	74.9	74.8	0.000776	
775.02020	3.8215546	14.51989312	1.881856	14.445	3672.75	3697.1874	76.9	76.4	74.9	74.8	0.000776	
780.04001	3.82265552	14.5201104	1.891856	14.44295	3678.75	3699.50406	76.9	76.5	74.8	74.8	0.000776	
785.02020	3.84083685	14.5201104	1.89103556	14.445	3675.75	3662.18701	76.8	76.5	74.9	75	0.000777	
790.02020	3.83115776	14.5201104	1.881856	14.445	3673.5	3694.83445	76.8	76.5	74.8	74.8	0.000777	
795.03	3.8208147	14.51989312	1.881856	14.445	3670.8	3648.48337	76.8	76.5	74.8	74.8	0.000777	

SpotFlow Sensor Testing

TEST: PM9972_9_8 May 1987 WEL-SP00N											
SECONDS	MAIN DUCT DIFF IN RCV. ABS (PSIA)	MAIN DUCT DIFF IN RCV. ABS (PSIA)	GAS INJECT DIFF IN RCV. ABS (PSIA)	WARTAKER OUTPUT (PPM)	SIG. (PPM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOL. (V)	WHIT CELL VOL. (V)
0.000000	3.75500445	14.50000349	0.180014055	14.435	12.4	5.820247	75.2	74.5	74.8	0.000709	
5.0000195	3.75114093	14.50000833	1.8441296	14.47875	14.3	5.811308	75.3	74.1	74.8	0.00021	
10.00002	3.75026471	14.50000833	1.84080335	14.47875	235.9	1111.85402	75.7	75.4	74.8	0.000368	
15.0000098	3.75500445	14.50000833	1.84400768	14.478	668	2379.44556	76.8	75.3	74.5	0.000373	
20.000002	3.75114064	14.50000693	1.84708234	14.47735	1489.5	5203.48735	75.8	74.5	74.7	0.000468	
25.000002	3.751140186	14.50000833	1.84080335	14.478	1908.75	3401.02077	75.9	75.3	74.2	0.000538	
30.000003	3.7488727	14.50000357	1.84910312	14.478	2348.35	3689.16515	76	75.4	74.5	0.000588	
35.000002	3.75113997	14.50000342	1.84708234	14.47875	2614.75	3989.34395	76	75.3	74.4	0.000655	
40.000002	3.75765512	14.50000342	1.84800768	14.47875	2760.3741	3970.1	75.9	74.4	74.8	0.000649	
45.000002	3.75765501	14.50000342	1.84708234	14.47875	2903.3	3770.87594	76.9	74.5	74.8	0.000656	
50.000002	3.75617563	14.50000342	1.84601312	14.478	3012.25	3700.85195	76.8	74.4	74.9	0.000692	
55.000002	3.7548825	14.50000342	1.84601312	14.47875	3084.25	3807.00653	75.9	74.4	74.8	0.000691	
60.000002	3.7548825	14.50000342	1.84601312	14.47875	3181.5	3819.85376	75.8	74.4	74.8	0.0007	
65.000002	3.7548825	14.50000342	1.84601312	14.47875	3185.25	3827.81213	75.8	74.4	74.8	0.000707	
70.000002	3.7548825	14.50000342	1.84601312	14.47875	3238.5	3839.3217	75.8	74.4	74.6	0.000714	
75.000002	3.7548825	14.50000342	1.84601312	14.47875	3296	3844.4276	75.8	74.4	74.7	0.000717	
80.000002	3.7548825	14.50000342	1.84601312	14.47875	3360	3856.16571	75.7	74.4	74.7	0.000722	
85.000002	3.7548825	14.50000342	1.84601312	14.47875	3321.75	3854.16232	75.5	74.4	74.9	0.000729	
90.000002	3.7548825	14.50000342	1.84601312	14.47875	3347.75	3869.03192	75.5	74.4	74.9	0.000735	
95.000002	3.7548825	14.50000342	1.84601312	14.47875	3388.5	3876.25854	75.3	74.4	74.9	0.000731	
100.000002	3.7548825	14.50000342	1.84601312	14.47875	3371.75	3870.85566	75.2	74.4	74.8	0.000733	
105.000002	3.7548825	14.50000342	1.84601312	14.47875	3385.5	3876.32345	75.3	74.4	74.8	0.000734	
110.000002	3.7548825	14.50000342	1.84601312	14.47875	3389.5	3882.51956	75.4	74.5	74.6	0.000737	
115.000002	3.7548825	14.50000342	1.84601312	14.47875	3408.75	3883.10397	75.5	74.4	74.8	0.000739	
120.000002	3.7548825	14.50000342	1.84601312	14.47875	3417.75	3888.4348	75.5	74.4	74.2	0.00074	
125.000002	3.7548825	14.50000342	1.84601312	14.47875	3423.5	3888.25435	75.5	74.4	74.6	0.000742	
130.000002	3.7548825	14.50000342	1.84601312	14.47875	3432.5	3890.55557	75.5	74.4	74.9	0.000743	
135.000002	3.7548825	14.50000342	1.84601312	14.47875	3442	3895.17851	75.5	74.4	74.9	0.000745	
140.000002	3.7548825	14.50000342	1.84601312	14.47875	3448	3898.98816	75.5	74.4	74.9	0.000746	
145.000002	3.7548825	14.50000342	1.84601312	14.47875	3465	3899.78732	75.4	74.4	74.8	0.000748	
150.000002	3.7548825	14.50000342	1.84601312	14.47875	3461.5	3893.87358	75.4	74.4	74.8	0.000749	
155.000002	3.7548825	14.50000342	1.84601312	14.47875	3485.75	3903.88834	75.4	74.4	74.7	0.00075	
160.000002	3.7548825	14.50000342	1.84601312	14.47875	3473.3	3893.37848	75.5	74.4	74.7	0.000751	
165.000002	3.7548825	14.50000342	1.84601312	14.47875	3478.75	3907.73247	75.5	74.4	74.8	0.000752	
170.000002	3.7548825	14.50000342	1.84601312	14.47875	3482	3912.60297	75.5	74.4	74.8	0.000753	
175.000002	3.7548825	14.50000342	1.84601312	14.47875	3485.75	3912.08848	75.2	74.4	74.8	0.000754	
180.000002	3.7548825	14.50000342	1.84601312	14.47875	3480.5	3908.27024	75.2	74.4	74.8	0.000755	
185.000002	3.7548825	14.50000342	1.84601312	14.47875	3484.75	3902.89285	75.2	74.4	74.7	0.000756	
190.000002	3.7548825	14.50000342	1.84601312	14.47875	3488.75	3902.89285	75.2	74.4	74.7	0.000757	
195.000002	3.7548825	14.50000342	1.84601312	14.47875	3503	3903.83765	75.3	74.4	74.7	0.000758	

Abstract

TEST RECORDS	MAIN DUCT DIFF IN DEG.	MAIN DUCT IN DEG.	GAS IN DUCT DIFF IN DEG.	GAS IN DUCT IN DEG.	WHITAKER OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MARK DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOL %
203 02002	3.75113334	14.430053	1.60228233	14.47875	3304.5	3908.18588	75.4	75.6	73.9	74.7	0.00752
205 02002	3.78850645	14.4523142	1.64162784	14.47875	3512	3897.25437	75.3	75.8	73.9	74.6	0.00754
210 02002	3.8121997	14.4536338	1.84225328	14.47875	3914.25	3882.90657	75.4	75.6	73.9	74.8	0.00754
215 02002	3.74551339	14.4503038	1.84225328	14.47875	3518.75	3911.87888	75.3	75.7	73.8	74.6	0.00754
220 02002	3.76875469	14.45118845	1.64225328	14.47725	3531	3917.86427	75.2	75.7	73.9	74.8	0.00754
225 02002	3.76575067	14.44835328	1.84225328	14.47875	3526.25	3918.24056	75.2	75.7	73.9	74.6	0.00754
230 02002	3.74424527	14.4458396	1.60331696	14.47725	3922.5	3923.62776	75.2	75.7	73.9	74.8	0.00755
235 02002	3.77165661	14.4513968	1.60373688	14.47875	3928.25	3914.00085	75.2	75.8	74.7	74.7	0.00755
240 02002	3.78111682	14.4551945	1.83973152	14.47875	3529	3916.44845	75.4	75.7	73.9	74.8	0.00755
245 02002	3.78983308	14.4523342	1.83913638	14.47725	3533.75	3917.87898	75.8	75.8	73.9	74.9	0.00756
250 02002	3.78301501	14.4523342	1.63812808	14.47875	3538.25	3913.37068	75.3	75.9	74.8	74.9	0.00756
255 02002	3.76612434	14.44908361	1.83973152	14.47875	3541	3909.21024	75.8	75.8	73.8	74.9	0.00759
260 02002	3.76812972	14.4458396	1.63913638	14.47875	3544	3919.82054	75.2	75.8	73.8	74.9	0.00758
265 02002	3.76488130	14.4513945	1.8378752	14.47725	3548.25	3927.72588	75.1	75.8	73.8	74.9	0.00758
270 02002	3.75551198	14.44908361	1.8378752	14.47725	3547.75	3923.88049	75.2	75.8	73.7	74.8	0.00757
275 02002	3.77865181	14.45008361	1.8378752	14.47875	3548.5	3923.62776	75.3	75.8	73.7	74.8	0.00758
280 02002	3.77228543	14.45308361	1.83733676	14.47875	3548.25	3918.48688	75.3	75.8	73.7	74.8	0.00758
285 02002	3.77228543	14.4513945	1.83733676	14.47875	3547	3916.44845	75.6	75.8	73.7	74.7	0.00756
290 02002	3.81865242	14.4551338	1.63733676	14.47875	3550.5	3915.87761	75.3	75.9	73.8	74.9	0.00756
295 02002	3.8253181	14.45308361	1.83733676	14.47875	3552.5	3918.48688	75.2	75.9	73.8	74.8	0.00758
300 02002	3.82604808	14.45308361	1.8378752	14.47875	3554.5	3915.87892	75.2	75.8	73.6	74.8	0.00758
305 02002	3.81277136	14.4493367	1.83630064	14.47875	3558	3913.75643	75.2	75.9	73.8	74.8	0.00759
310 02002	3.74048365	14.4551338	1.6378752	14.47875	3558.25	3915.87761	75.3	75.6	73.8	74.8	0.00756
315 02002	3.75260138	14.45008361	1.83630064	14.47725	3557.5	3918.75315	75.1	76	73.6	74.8	0.00758
320 02002	3.75887700	14.45008361	1.83630064	14.47725	3557.25	3923.39164	74.9	76	73.5	74.6	0.00759
325 02002	3.77595961	14.4513945	1.83630064	14.47875	3557.25	3917.98427	74.5	76	73.4	74.9	0.0

Background

TEST: K95572_5 8 May 1987 VNC-S900L

[illegible]

TEST: K00872 @ 8 May 1987 WEC SPOL												
SECONDS	MAIR DUCT DIFF (IN H ₂ O)	MAIN DUCT ABS (PSIA)	GAS INJECT GAS (IN H ₂ O)	WHITAKER OUTLET (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MARK DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOL (V)	WHIT CELL VOL (V)	WHIT CELL VOL (V)
600.02002	3.75777894	14.5461397	1.83088508	14.4775	3896.25	3888.4546	72.4	75.6	71.5	74.5	0.00765	0.00765
600.02002	3.75690573	14.5505283	1.83074448	14.4775	3867.25	3895.5058	72.4	75.8	71.7	74.4	0.00767	0.00767
610.02002	3.75697087	14.5525928	1.83182008	14.47875	3800.75	3894.3172	72.3	75.8	71.7	74.7	0.00767	0.00767
615.02002	3.76112134	14.5518846	1.83074448	14.4765	3861.5	3886.3606	72.5	75.6	71.5	74.8	0.00766	0.00766
620.02002	3.77903985	14.5508346	1.83094448	14.4765	3802.25	3893.83175	72.7	75.8	71.7	74.6	0.00765	0.00765
625.02002	3.76074635	14.5535242	1.82974448	14.476	3801.25	3800.5125	72.6	75.5	71.6	74.8	0.00768	0.00768
630.02002	3.77174851	14.5481357	1.83074448	14.478	3801.75	3892.51772	72.4	75.5	71.7	74.5	0.00768	0.00768
635.02002	3.76950448	14.5483257	1.8284936	14.478	3803.5	3892.28847	72.4	75.5	71.7	74.5	0.00768	0.00768
640.02002	3.75550213	14.5502553	1.82811804	14.478	3807.5	3887.22887	72.8	75.5	71.7	74.7	0.00768	0.00768
645.02002	3.74326846	14.5503349	1.82811804	14.478	3805	3882.66736	72.4	75.5	71.7	74.8	0.00768	0.00768
650.02002	3.76127268	14.5503953	1.8284936	14.4765	3808	3886.51652	72.3	75.4	71.7	74.4	0.00768	0.00768
655.02002	3.75879392	14.5503825	1.82974448	14.478	3808.75	3881.22850	72.2	75.4	71.7	74.4	0.00768	0.00768
660.02002	3.74174815	14.5508883	1.82974448	14.4775	3808	3882.51106	72.3	75.4	71.6	74.3	0.00768	0.00768
665.02002	3.74487054	14.5505053	1.8284936	14.47875	3810.8	3883.15333	72.5	75.4	71.7	74.5	0.00768	0.00768
670.02002	3.75697087	14.5523342	1.82811804	14.478	3807.25	3887.59715	72.8	75.4	71.5	74.5	0.00767	0.00767
675.02002	3.76928894	14.5508349	1.82811804	14.478	3808.25	3882.37695	72.9	75.4	71.6	74.4	0.00767	0.00767
680.02002	3.76950448	14.5505653	1.82974448	14.478	3809.25	3883.76924	72.9	75.4	71.7	74.5	0.00768	0.00768
685.02002	3.75317176	14.5503863	1.82974448	14.47675	3806.5	3882.35635	72.9	75.4	71.6	74.5	0.00767	0.00767
690.02002	3.75932575	14.5508349	1.8292853	14.478	3806.25	3888.45398	72.8	75.3	71.5	74.8	0.00767	0.00767
695.02002	3.77785157	14.5523342	1.8284936	14.478	3807.5	3887.74146	72.7	75.3	71.5	74.6	0.00768	0.00768
700.02002	3.76176776	14.5503342	1.82874448	14.478	3809.25	3882.12365	72.8	75.4	71.4	74.3	0.00769	0.00769
705.02002	3.76825175	14.5505349	1.82974448	14.478	3808.25	3882.35477	72.7	75.3	71.5	74.3	0.00767	0.00767
710.02002	3.7535432	14.5515645	1.82974448	14.47875	3810.5	3883.81703	72.7	75.3	71.5	74.6	0.00769	0.00769
715.02002	3.77907088	14.5508349	1.83038692	14.4775	3813.5	3887.74146	72.8	75.3	71.5	74.8	0.00768	0.00768
720.02002	3.7613636	14.5505053	1.82811804	14.478	3818.25	3885.94739	73.2	75.3	71.5	74.6	0.00768	0.00768
725.02002	3.7748835	14.5492357	1.82974448	14.47725	3815	3884.40862	73.3	75.3	71.4	74.3	0.00777	0.00777
730.02002	3.75485214	14.5503342	1.82874448	14.47675	3817.5	3883.12615	73	75.3	71.4	74.8	0.00768	0.00768
735.02002	3.75850213	14.5505349	1.82974448	14.47725	3817.5	3885.75958	72.7	75.2	71.4	74.3	0.00769	0.00769
740.02002	3.76438295	14.5505349	1.82974448	14.478	3816.75	3884.56142	72.7	75.3	71.5	74.4	0.00768	0.00768
745.02002	3.76046797	14.5461357	1.834748	14.478	3817.25	3888.78214	72.7	75.2	71.4	74.5	0.00768	0.00768
750.02002	3.75802121	14.5505053	1.834748	14.478	3818.25	3885.17461	72.7	75.2	71.4	74.5	0.00777	0.00777
755.02002	3.75950213	14.5505349	1.82874448	14.478	3822.5	3884.95932	73	75.3	71.4	74.2	0.00771	0.00771
760.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
765.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
770.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
775.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
780.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
785.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
790.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
795.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
800.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
805.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
810.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
815.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
820.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
825.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
830.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
835.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
840.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
845.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
850.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
855.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
860.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
865.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
870.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
875.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
880.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
885.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
890.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
895.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
900.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
905.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
910.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
915.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
920.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
925.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
930.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
935.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
940.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
945.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
950.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
955.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
960.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5	3882.24906	72.6	75.2	71.3	74.5	0.00771	0.00771
965.02002	3.7613636	14.5503342	1.82974448	14.47675	3823.5							

Spot/Place Sensor Testing

TEST NUMBER: 5, 5 May 1997 WEL SPON									
RECORDS	MAIN DUCT	MAIN DUCT	GAS INJECT	WHITTAKER	SMC (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL
DIFF (IN H2O)	ABS (PSIA)	ABS (PSIA)	DIFF (IN H2O)	OUTPUT (PPM)	TEMP (F)	TEMP (F)	GAS TEMP (F)	TEMP (F)	TEMP (F)
900.08	3.7692715	14.5430383	1.8308536	3628.25	3898.53103	72.2	75.2	71.2	74.2
805.05002	3.74174418	14.5493357	1.8318208	3628.25	3898.53103	72.7	75.1	71.3	74.2
810.02082	3.7696308	14.5483387	1.8318208	3628.25	3898.53103	72.6	75.1	71.3	74.5
815.06	3.76736026	14.5493357	1.8309836	3628.25	3898.53103	72.8	75.1	71.3	74.5
820.07001	3.77175715	14.5493357	1.8309836	3630.75	3905.912	72.8	75	71.3	74.3
825.02082	3.76237378	14.5483387	1.8308536	3631.15	3898.53103	72.8	75.1	71.2	74.2
830.05002	3.7749835	14.5493357	1.8309836	3630.75	3898.53103	72.8	75	71.1	74.2
835.07001	3.79174052	14.5508349	1.8309836	3630.75	3898.53103	72.7	75	71.2	74.2
840.02082	3.78487488	14.5483387	1.8318208	3630.75	3898.53103	72.7	75	71.1	74.4
845.06001	3.76550226	14.5493357	1.8309836	3628.25	3898.53103	72.7	75	71.1	74.4
850.09	3.76550226	14.5493357	1.8309836	3628.25	3898.53103	72.7	75	71.1	74.4
855.02082	3.76993444	14.5483387	1.8318208	3627.35	3898.53103	72.7	75	71.1	74.2
860.07001	3.77175715	14.5493357	1.8308536	3627.35	3898.53103	72.8	75	71.1	74.2
865.02082	3.77550877	14.5493357	1.8318208	3628.25	3898.53103	73	75	71.1	74.3
870.05002	3.77936386	14.5508349	1.8309836	3628.25	3898.53103	73	75	71.1	74.3
875.06	3.76912672	14.5508349	1.8309836	3630.75	3898.53103	72.7	75	71.1	74.3
880.02082	3.76677672	14.5508349	1.8309836	3628.25	3898.53103	72.8	75	71.1	74.3
885.05002	3.76237378	14.5483387	1.8308536	3628.25	3898.53103	72.8	75	71.1	74.1
890.07001	3.76682218	14.5508349	1.8309836	3630.75	3898.53103	72.2	74.9	71.2	74.3
895.02082	3.77862312	14.5508349	1.8318208	3630.75	3898.53103	72.2	74.8	71.1	74.3
900.05002	3.77813634	14.5508349	1.83224624	3636.5	3877.48968	71.5	74.9	71	74.3
30% OF 15 min value									
30% OF 30 min value	30%	30%	30%	30%	30%	30%	30%	30%	30%
30% OF 15 min value	30%	30%	30%	30%	30%	30%	30%	30%	30%
30% OF 30 min value	30%	30%	30%	30%	30%	30%	30%	30%	30%

TEST RM3572, 7 May 1987 WEL SPOOL									
SECONDS	MAIN DUCT	MAIN DUCT	GAS INJECT	GAS INJECT	WHITAKER	EMC (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT
	DIFF (IN H2O)	ABS (PSIA)	DIFF (IN H2O)	ABS (PSIA)	OUTPUT (PPM)		TEMP (F)	TEMP (F)	TEMP (F)
									WHIT CELL
									(VOL %)
0.000932	3.81802713	14.5118545	0.100805164	14.48526	42.35	4.933464	72.2	72.3	72.4
0.019493	3.81177443	14.5133538	0.334883824	14.54385	42.8	5.6134835	72.3	72.5	72.4
1.0191908	3.81186924	14.5148531	3.30306066	14.54175	437.75	2035.84552	72.3	72.5	72.4
2.0191908	3.80517701	14.5154416	3.3554416	14.54322	1969.75	4291.44719	72.3	72.5	72.4
3.0191908	3.79445666	14.5155342	3.45508466	14.51735	2786.75	8438.4398	72.4	72.5	72.4
4.0191908	3.78081325	14.5118546	3.50325266	14.538	3768.5	5941.58858	72.4	72.4	72.4
5.0191908	3.81236977	14.5111544	3.28152574	14.51725	4369.5	8152.82653	72.3	72.4	72.4
6.0191908	3.81740786	14.5118546	3.2557624	14.538	4882	6332.22517	72.3	72.4	72.4
7.0191908	3.806147	14.5110469	3.25569666	14.53725	5180.75	6335.3353	72.4	72.4	72.4
8.0191908	3.81480078	14.5148531	3.25534944	14.51725	5369.75	6415.6648	72.3	72.4	72.4
9.0191908	3.81178301	14.5141324	3.25581488	14.51735	5570.5	6456.58146	72.4	72.4	72.4
10.0191908	3.80552173	14.5118546	3.25881468	14.538	5708.35	5454.33138	72.4	72.4	72.4
11.0191908	3.80552173	14.5111544	3.25534944	14.538	5814	5469.54633	72.4	72.4	72.4
12.0191908	3.81363024	14.5110469	3.25881488	14.53725	5816.75	6181.88532	72.4	72.5	72.4
13.0191908	3.79813636	14.5128042	3.25824844	14.538	5897.5	6511.42438	72.4	72.4	72.4
14.0191908	3.82114496	14.5128042	3.25824844	14.53725	5943.75	6536.60354	72.4	72.5	72.4
15.0191908	3.82114496	14.5128042	3.25824844	14.538	6101.75	6581.60354	72.4	72.5	72.4
16.0191908	3.82114496	14.5128042	3.25824844	14.538	6101.75	6581.60354	72.4	72.5	72.4
17.0191908	3.82114496	14.5128042	3.25824844	14.538	6101.75	6581.60354	72.4	72.5	72.4
 						

Supervisor: Denise Tabor

TEST: COMBSTR 3 May 1987 WEC-SP00L												
SECONDS	MAIN ELEY DIFF IN DEG	MARK DUCT HIG (PSIA)	GAS INJECT DIFF IN DEG	GAS INJECT ABS (PSIA)	WHTYAKER OUTPUT (FPM)	EMC (FPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN ELEY TEMP (F)	WHT DIEL TEMP (F)	WHT CELL (COSTS)	
200.01988	3.764801932	14.5126342	3.303335822	14.53423	6471.25	6368.20138	72.3	72.8	71	72.3	0.00119	
201.01998	3.76666078	14.5135138	3.29135552	14.533	6438.6	6704.6192	72.3	72.9	71	72.4	0.001181	
202.01998	3.76806076	14.5135138	3.29313552	14.53423	6461.75	6711.93842	72.2	72.8	70.8	72.4	0.001191	
215.01998	3.82677227	14.5118848	3.333138268	14.53423	6463.25	6774.34842	72.2	72.9	72.3	72.9	0.001191	
220.01998	3.8061437	14.5135138	3.29303464	14.53423	6467	6703.87932	72.2	72.9	70.8	72.3	0.001182	
225.01998	3.83062281	14.5126342	3.3284732	14.5335	6467.5711	6550.05	72.2	72.9	70.9	72.4	0.001194	
230.01998	3.76116092	14.5111448	3.29303464	14.53423	6506.75	6702.62844	72.1	72.9	70.9	72.3	0.001186	
235.01998	3.78610471	14.5135138	3.29303464	14.53423	6515	6705.44888	72.1	72.9	71	72.3	0.001187	
240.01998	3.78813836	14.5118848	3.3284732	14.5335	6627.5	6717.5385	72.1	72.8	71.4	72.3	0.001198	
245.01998	3.82051887	14.5126342	3.333138268	14.533	6631.25	6715.28892	72.1	72.9	71	72.4	0.001188	
250.01998	3.78730026	14.5111448	3.29823532	14.53423	6631.25	6721.59557	72.1	72.9	70.9	72.3	0.001189	
255.01998	3.80469246	14.5126342	3.3284732	14.5335	6633	6710.362	72.1	72.8	71	72.3	0.0012	
260.01998	3.80677227	14.5126342	3.3284732	14.53423	6637.5	6715.31828	72	72.3	70.9	72.3	0.0012	
265.01998	3.78663664	14.5170503	3.29303464	14.533	6646	6735.96236	72.1	72.3	71	72.3	0.0012	
270.01998	3.80877227	14.5111448	3.3284732	14.5335	6646	6735.96236	72.1	72.3	71	72.3	0.001261	
275.01998	3.80735764	14.5118848	3.3284732	14.5335	6648.5	6731.38288	72.1	72.3	71	72.4	0.001305	
280.01998	3.80469246	14.5170503	3.29303464	14.5335	6650.75	6731.38288	72.1	72.3	71.2	72.3	0.001288	
285.01998	3.80564582	14.5118848	3.3284732	14.5335	6657.25	6702.87828	72.1	72.3	71.1	72.3	0.001264	
290.01998	3.73301833	14.515042	3.29303464	14.5335	6670	6717.44846	72	72.3	71.1	72.3	0.001204	
295.01998	3.80114484	14.5111448	3.3284732	14.53423	6671.5	6732.12654	72.1	72.3	71.1	72.4	0.001203	
300.01998	3.79140682	14.5111448	3.3284732	14.5335	6689.25	6732.38836	72.1	72.3	71.1	72.3	0.001364	
305.01998	3.78435267	14.5111448	3.3284732	14.5335	6671	6736.76704	72.1	72.3	71	72.3	0.001204	
310.01998	3.77663512	14.5111448	3.3284732	14.5335	6676.5	6736.76704	72.2	72.3	71	72.3	0.001206	
315.01998	3.78428226	14.5111448	3.3284732	14.5335	6693	6736.76704	72.3	72.3	70.9	72.3	0.001207	
320.01998	3.78964378	14.5111448	3.3284732	14.5335	6684.25	6723.90181	72.3	72.3	70.6	72.3	0.001206	
325.01998	3.78901477	14.5118848	3.3284732	14.53423	6687	6715.51973	72.4	72.3	70.9	72.3	0.001207	
330.01998	3.77177115	14.5111448	3.3284732	14.5335	6690.5	6717.23828	72.4	72.3	70.9	72.4	0.001309	
335.01998	3.76886988	14.5111448	3.3284732	14.5335	6694.25	6716.54461	72.4	72.3	70.8	72.3	0.001206	
340.01998	3.78551741	14.5126342	3.32737392	14.53423	6598.25	6733.38494	72.3	72.3	70.9	72.3	0.001207	
345.01998	3.78485214	14.5111448	3.32734648	14.53423	6598.25	6736.71688	72.3	72.3	70.8	72.3	0.001207	
350.01998	3.75996943	14.5126342	3.32387392	14.5335	6556.4	6726.46483	72.3	72.3	70.6	72.4	0.001207	
355.01998	3.80565173	14.5118848	3.32737392	14.5335	6595	6726.51747	72.3	72.3	70.8	72.3	0.001208	
360.01998	3.79485214	14.5111448	3.3284732	14.53423	6636	6738.00265	72.3	72.3	70.8	72.3	0.001206	
365.01998	3.81487561	14.5111448	3.3284732	14.5335	6630.25	6733.37044	72.4	72.3	70.6	72.3	0.001206	
370.01998	3.78889643	14.5126342	3.3284732	14.53423	6630.25	6733.37044	72.4	72.3	70.6	72.3	0.001206	
375.01998	3.78888134	14.5111448	3.31948718	14.53423	6630	6728.23834	72.3	72.3	70.8	72.3	0.001207	
380.01998	3.8261187	14.5111448	3.3284732	14.53423	6686.25	6741.56623	72.3	72.3	70.6	72.3	0.001207	
385.01998	3.8261187	14.5111448	3.3284732	14.53423	6686.25	6743.38035	72.3	72.3	70.6	72.3	0.001207	
390.01998	3.8261187	14.5111448	3.3284732	14.53423	6686.25	6743.38035	72.3	72.3	70.6	72.3	0.001207	
395.01998	3.8261187	14.5111448	3.3284732	14.53423	6686.25	6743.38035	72.3	72.3	70.6	72.3	0.001207	
400.01998	3.8261187	14.5111448	3.3284732	14.53423	6686.25	6743.38035	72.3	72.3	70.6	72.3	0.001207	

SpotPhoto Sensor Testing

TEST: HMF372_7 2 May 1987 PRE: SP001													
SECTIONS	MAIN DUCT	MAIN DUCT	GAS INJECT	GAS INJECT	WHITTAVER	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL				
	DIFF. IN P201	ABS (PSIA)	DIFF. IN P201	ABS (PSIA)	OUTPUT (PSIA)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)				
800.0188	3.76979756	14.5103533	3.21047219	14.53425	3608	6741.58828	72.1	70.5	71.2	72.3	0.01228		
805.16	3.76980868	14.5118638	3.22073384	14.53425	6668	6745.17691	72.1	71.5	71.3	72.2	0.01238		
810.04031	3.80884808	14.5111049	3.2208876	14.53425	6686	6746.71218	72.1	71.5	71.3	72.2	0.01225		
815.01198	3.7938418	14.5128042	3.2200976	14.53425	6703.26	6756.16902	72.1	71.5	71.3	72.2	0.01234		
820.04868	3.7842656	14.5130963	3.21947718	14.53425	6702.75	6751.16306	72.1	71.5	71.3	72.2	0.01238		
825.01938	3.76551201	14.5128642	3.2200976	14.53425	6702.24	6756.9198	72.1	71.5	71.1	72.2	0.01234		
830.01168	3.7657294	14.5111043	3.2200976	14.53425	6702.5	6756.88351	72.1	71.5	71.2	72.2	0.01225		
835.02	3.80114484	14.5118638	3.2200976	14.53425	6706	6759.64402	72.1	71.5	70.8	72.3	0.01234		
840.01898	3.79498714	14.5128042	3.2208876	14.53425	6708	6746.50461	72.2	71.5	70.8	72.3	0.01225		
845.01898	3.7997393	14.5128042	3.2200976	14.535	6708.26	6743.80294	72.2	71.5	70.9	72.3	0.01226		
850.04858	3.77782985	14.5130963	3.22194848	14.535	6708.75	6744.40553	72.2	71.5	70.9	72.3	0.01238		
855.04858	3.7728343	14.5133338	3.2200976	14.535	6708.5	6746.4352	72.2	71.5	71.2	72.3	0.01238		
860.01898	3.78463844	14.5111043	3.2208876	14.535	6708.75	6723.28412	72.1	71.5	71.2	72.3	0.01228		
865.01898	3.80489248	14.5130963	3.2208876	14.535	6708.75	6734.1002	72.2	71.5	71.2	72.3	0.01228		
870.01898	3.78613838	14.5111043	3.21647219	14.53425	6712.8	6738.69318	72.3	71.5	71.1	72.3	0.01225		
875.01168	3.76550445	14.5096057	3.2200976	14.535	6711.5	6740.20481	72.3	71.5	71.2	72.3	0.01228		
880.04858	3.7693943	14.5130963	3.22187382	14.535	6712.5	6733.89743	72.3	71.5	71.3	72.3	0.01228		
885.01898	3.7688308	14.5096057	3.22197383	14.535	6711.5	6751.83008	72.2	71.5	71.2	72.3	0.01234		
890.01898	3.76050278	14.5096057	3.22197382	14.535	6708.75	6759.78373	72.2	71.5	71.2	72.3	0.01228		
895.01898	3.76883944	14.5111043	3.22187382	14.53575	6708.75	6761.331	72.3	71.5	71.2	72.3	0.01225		
900.01898	3.8123837	14.5111043	3.2223383	14.53575	6710.75	6748.61829	72.3	71.5	71.2	72.3	0.01225		
905.01898	3.78613838	14.5118638	3.22447358	14.53575	6712.75	6748.66046	72.3	71.5	71.5	72.2	0.01228		
910.01898	3.78826471	14.5111043	3.22134849	14.535	6712	6748.9433	72.3	71.5	71.2	72.3	0.01228		
915.01898	3.805147	14.5118638	3.22447358	14.535	6710.75	6738.77153	72.3	71.5	71.2	72.3	0.01228		
920.01898	3.80832871	14.5118638	3.22134848	14.535	6714.5	6728.72117	72.2	71.5	71.3	72.2	0.01228		
925.04031	3.79114025	14.5111043	3.22383834	14.535	6720.5	6733.84714	72.2	71.5	71.4	72.3	0.01228		
930.01898	3.81385534	14.5103533	3.22383834	14.535	6728	6738.51074	72.3	71.5	71.5	72.2	0.01228		
935.01898	3.78676363	14.5111043	3.22187382	14.535	6733	6737.88915	72.3	71.5	71.5	72.3	0.01228		
940.01898	3.79775927	14.5128042	3.2226993	14.535	6737.75	6752.96438	72.3	71.5	71.5	72.3	0.01228		
945.05	3.82203838	14.5141034	3.22383834	14.53425	6739	6762.88571	72.3	71.5	71.7	72.2	0.01228		
950.01898	3.8188924	14.5103533	3.22383834	14.535	6738.5	6763.88395	72.3	71.5	71.7	72.2	0.01228		
955.02	3.80177011	14.5128042	3.22473883	14.53425	6740	6766.88849	72.3	71.5	71.7	72.2	0.01228		
960.01898	3.78301201	14.5096057	3.22383834	14.53425	6746.5	6740.8174	72.3	71.5	71.8	72.2	0.01228		
965.01898	3.80489248	14.5118638	3.22473883	14.535	6748.5	6730.67225	72.4	71.5	71.8	72.2	0.01228		
970.05	3.80884808	14.5118638	3.22473883	14.535	6748	6747.88848	72.4	71.5	71.8	72.2	0.01228		
975.04858	3.80177011	14.5111043	3.22383834	14.53575	6751.5	6757.22022	72.4	71.5	71.8	72.2	0.01228		
980.01898	3.81689248	14.5103533	3.22383834	14.53425	6754.5	6759.85333	72.4	71.5	71.7	72.2	0.01228		
985.07031	3.79519525	14.5118638	3.22383834	14.53425	6747	6746.88848	72.4	71.5	71.8	72.2	0.01228		
990.01898	3.8114092	14.5111043	3.22383834	14.535	6743.75	6736.87821	72.4	71.5	71.9	72.2	0.01228		
995.01898	3.80736754	14.5111043	3.22383834	14.53425	6744	6740.38517	72.4	71.5	71.9	72.2	0.01228		

Spot/Place Sensor Testing

TEST: KW5272, 2 May 1997 WEC SP001									
SECTIONS	MAIN DUCT	GAS INJECT	WHITENER	SAC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT WHRT CELL TEMP (F)	WHRT CELL (VOLT)	WHRT CELL (F)
OFF IN H2O	ABS PRESS	DIFF IN H2O	ABS PRESS	OUTPUT (PPM)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
800.01886	3.8167132	14.5113346	3.22383024	14.5335	67.43.75	67.55.9368	72.5	73.7	71.9
800.01886	3.76363964	14.5089361	3.22447568	14.5335	67.57	67.56.83568	72.5	73.7	72.2
810.07051	3.81677558	14.5118346	3.22872656	14.5335	67.53.75	67.56.55211	72.5	73.7	72.2
810.01886	3.79926903	14.5103343	3.22447568	14.5335	67.52	67.41.84256	72.5	73.7	71.9
820.01886	3.80038538	14.5111048	3.22572656	14.5335	67.59.75	67.53.41003	72.5	73.7	71.9
830.01886	3.80303826	14.5118346	3.22447568	14.5335	67.51	67.48.0625	72.5	73.7	72.2
830.01886	3.81052985	14.5103343	3.22572656	14.5335	67.52.5	67.76.44034	72.5	73.7	72.2
830.01886	3.77863512	14.5103343	3.22310112	14.5335	67.52.75	67.77.86017	72.5	73.7	71.9
840.01886	3.79871940	14.5111048	3.22572656	14.5335	67.48.75	67.79.0035	72.5	73.7	72.2
850.01886	3.79428935	14.5118346	3.22572656	14.5335	67.47.75	67.74.50483	72.5	73.7	72.2
860.07051	3.79176875	14.5118346	3.228362	14.5335	67.44	67.44.85162	72.5	73.7	72.2
860.07051	3.80677727	14.5113346	3.228362	14.5335	67.47.5	67.53.11991	72.5	73.7	72.2
860.01886	3.81427551	14.5128042	3.228362	14.5335	67.57.75	67.54.86832	72.5	73.7	72.2
870.01886	3.80028838	14.5133343	3.22872656	14.5335	67.61.25	67.49.30481	72.5	73.7	72.2
875.07051	3.76676785	14.5126042	3.226382	14.5335	67.64	67.47.48101	72.5	73.7	72.2
880.01886	3.80677727	14.5126042	3.22572656	14.5335	67.68	67.47.83369	72.5	73.7	72.2
885.03	3.79575087	14.5111048	3.22572656	14.5335	67.64.53	67.55.88251	72.5	73.7	72.2
890.01886	3.77330747	14.5096037	3.22572656	14.5335	67.63.75	67.56.50172	72.5	73.7	72.2
895.01886	3.81480075	14.5111048	3.228362	14.5335	67.63.75	67.54.81362	72.5	73.7	72.2
900.01886	3.79491925	14.5111048	3.22572656	14.5335	67.64.5	67.44.11812	72.5	73.7	72.2
30% OF 15 min value									
800.01886	3.76363964	14.5089361	3.22447568	14.5335	67.57	67.56.83568	72.5	73.7	72.2
810.07051	3.81677558	14.5118346	3.22872656	14.5335	67.53.75	67.56.55211	72.5	73.7	72.2
810.01886	3.79926903	14.5103343	3.22447568	14.5335	67.52	67.41.84256	72.5	73.7	71.9
820.01886	3.80038538	14.5111048	3.22572656	14.5335	67.59.75	67.53.41003	72.5	73.7	71.9
830.01886	3.80303826	14.5118346	3.22447568	14.5335	67.51	67.48.0625	72.5	73.7	72.2
830.01886	3.81052985	14.5103343	3.22572656	14.5335	67.52.5	67.76.44034	72.5	73.7	72.2
840.01886	3.77863512	14.5103343	3.22310112	14.5335	67.52.75	67.77.86017	72.5	73.7	71.9
850.01886	3.79871940	14.5111048	3.22572656	14.5335	67.48.75	67.79.0035	72.5	73.7	72.2
860.07051	3.79428935	14.5118346	3.22572656	14.5335	67.47.75	67.74.50483	72.5	73.7	72.2
860.07051	3.79176875	14.5118346	3.228362	14.5335	67.44	67.44.85162	72.5	73.7	72.2
860.01886	3.80677727	14.5113346	3.228362	14.5335	67.47.5	67.53.11991	72.5	73.7	72.2
860.01886	3.81427551	14.5128042	3.228362	14.5335	67.57.75	67.54.86832	72.5	73.7	72.2
870.01886	3.80028838	14.5133343	3.22872656	14.5335	67.61.25	67.49.30481	72.5	73.7	72.2
875.07051	3.76676785	14.5126042	3.226382	14.5335	67.64	67.47.48101	72.5	73.7	72.2
880.01886	3.80677727	14.5126042	3.22572656	14.5335	67.68	67.47.83369	72.5	73.7	72.2
885.03	3.79575087	14.5111048	3.22572656	14.5335	67.64.53	67.55.88251	72.5	73.7	72.2
890.01886	3.77330747	14.5096037	3.22572656	14.5335	67.63.75	67.56.50172	72.5	73.7	72.2
895.01886	3.81480075	14.5111048	3.228362	14.5335	67.63.75	67.54.81362	72.5	73.7	72.2
900.01886	3.79491925	14.5111048	3.22572656	14.5335	67.64.5	67.44.11812	72.5	73.7	72.2

2019-2020

TEST: KRG0777_# 3 May 1997 NRCC-SP-COOL												
SECONDS	MAIN DUCT DIFF IN H2O (F/°C)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF IN H2O (F/°C)	GAS INJECT ABS (PSIA)	WHITTAKER OUTPUT (F/°C)	SRC (F/°C)	AMBERT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUST TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL (VOLTS)	
0.010000	3.79737604	14.550033	0.65018000	14.450033	14.450033	40.1	5.338572	72.5	72	72.5	0.000284	
5.000155	3.79614268	14.5171019	3.34142966	14.55	14.55	59.475	5.46701445	72.5	72.7	72	0.00023	
10.010002	3.77800683	14.5171019	3.7681104	14.5435	14.5435	450	2.93412802	72.5	72.7	72.8	0.000337	
15.020002	3.81427631	14.5171019	3.317328	14.5435	184.178	42.54	2.8522	72.5	72.7	72.5	0.000352	
20.030002	3.82448001	14.5171019	3.58687488	14.54175	3.58687488	278.5	5.65618244	72.5	72.7	72	0.000686	
25.040002	1.78113682	14.5166012	3.2674034	14.54175	3.2674034	378.5	8.677110328	72.5	72.7	72.8	0.000812	
30.050002	3.71258002	14.5301106	3.2600151	14.5425	4.037778	614.5	5.1585	72.5	72.7	72.5	5.0003	
35.060002	3.79737604	14.5171019	3.25137664	14.5425	4.845.25	535.9	4.7741	72.5	72.7	72	0.000864	
40.070002	3.79648864	14.515085	3.26586898	14.5425	517.9	837.4	3.1555	72.5	72.7	72.5	5.00157	
45.080002	3.81036457	14.5201004	3.25816032	14.5425	54.37	841.4	810.18	72.5	72.7	72.5	5.00184	
50.090002	3.82111548	14.5178915	3.2613336	14.5425	5.692	844.7	515.92	72.5	72.7	72	5.00196	
55.100002	3.82111548	14.5178915	3.2613336	14.5425	5.708.25	849.6	1.9805	72.5	72.7	71.9	5.00196	
60.110002	3.8179147	14.5301106	3.26137664	14.5425	5.860.25	853.5	4.8373	72.5	72.7	71.6	5.001101	
65.120002	3.80486846	14.5193308	3.26137664	14.5435	5.8627.25	855.1	4.1538	72.5	72.8	72	5.001113	
70.130002	3.81480078	14.5189312	3.26480294	14.5435	5.8686.75	858.4	3.8034	72.5	72.8	72	5.001122	
75.140002	3.80863803	14.51869012	3.26137664	14.5425	8.650.75	866.6	7.841	72.5	72.8	71.9	5.00123	
80.150002	3.81877659	14.5161006	3.26086252	14.5435	8101	859.6	4.8813	72.5	72.8	72	5.001138	
85.160002	3.81827787	14.5183968	3.26200008	14.5435	6165.75	850.7	8.0328	72.4	72.3	71.9	5.001144	
90.170002	3.79485763	14.5183202	3.26136732	14.5435	8198.25	860.0	871.34	72.5	72.5	71.5	5.001438	
95.180002	3.81477111	14.5189012	3.26869002	14.5435	8214.5	865.4	8.0238	72.5	72.8	71.9	5.001133	
100.190002	3.83427718	14.5186012	3.28211278	14.5425	8254	854.4	8.0548	72.5	72.8	71.9	5.001179	
105.200002	3.81827787	14.5201004	3.26137664	14.5435	8274.25	865.4	7.0277	72.5	72.8	71.9	5.001181	
110.210002	3.80300665	14.5178915	3.26137664	14.5425	8299.78	868.6	19.81	72.4	72.8	71.9	5.001166	
115.220002	3.79485763	14.5183968	3.26137664	14.5435	8325.25	867.7	7.8832	72.5	72.9	71.8	5.001160	
120.230002	3.79485763	14.5183968	3.26137664	14.5435	8336	868.0	8.3114	72.4	72.8	71.8	5.00117	
125.240002	3.79614268	14.5183968	3.28574768	14.5428	8348.25	867.9	3.358	72.4	72.8	71.8	0.001172	
130.250002	3.80777011	14.5186012										
135.260002	3.80562173	14.5186912										
140.270002	3.79301201	14.5171019										
145.280002	3.79614268	14.5183968										
150.290002	3.79174519	14.5178915										
155.300002	3.82055921	14.5178915										
160.310002	3.81874524	14.51733068										
165.320002	3.80133538	14.5186912										
170.330002	3.8186534	14.5186912										
175.340002	3.7981848	14.5178915										
180.350002	3.81877889	14.5201004										
185.360002	3.82550337	14.5193308										
190.370002	3.82550337	14.5193308										
195.380002	3.82550337	14.5193308										
200.390002	3.81827787	14.5193308										

Spot/Probe Sensor Testing

TEST RUNS 7 & 7 May 1987 WEC-SPOT-1A									
SECONDS	MAIN OIL	MAIN DIESEL	GAS INJECT	WHTAKER	SNG (PPM)	AMBIENT FLAMMABLE	TEMP (F)	MAIN OIL	WHT CELL
DIFF (H:MM:SS)	ABS (PSIA)	DIFF (H:MM:SS)	ABS (PSIA)	OUTPUT (PPM)	TEMP (F)	TEMP (F)		TEMP (F)	MOULTON
205.02002	3.80032281	14.5171018	3.53024944	14.543225	6540	6752	684.36	72.1	72.8
206.02002	3.80032271	14.5201504	3.53050032	14.543325	6342.5	6765	1854.2	72.1	72.8
210.02002	3.82113348	14.5188012	3.52980032	14.544	6654	6775	4172	72.1	72.8
215.02002	3.81186574	14.5195609	3.52990032	14.54325	6563.35	6768	25055	72.1	72.8
220.02002	3.80035157	14.5168325	3.52980032	14.54175	6570	6767	3720	72.1	72.8
225.02002	3.81980754	14.5201004	3.52980032	14.5425	6581	6762	34818	72.1	72.8
230.02002	3.81188524	14.5171018	3.52980032	14.5425	6585.25	6762	33719	72.1	72.8
235.02002	3.78928933	14.5195609	3.52980032	14.54325	6584	6764	38755	72.1	72.8
240.02002	3.78928933	14.5171018	3.52980032	14.5425	6588.75	6764	12676	72.1	72.8
245.02002	3.81188524	14.5195609	3.52980032	14.5425	6581.25	6766	15173	72.1	72.8
250.02002	3.81188524	14.5195609	3.52980032	14.5425	6584.5	6767	71409	72.1	72.8
255.02002	3.81427551	14.5182558	3.53483881	14.54325	6535	6768	75069	72.1	72.8
260.02002	3.81188524	14.5195609	3.52980032	14.5425	6512	6767	87116	72.1	72.8
265.02002	3.81615132	14.5165523	3.52980032	14.54325	6625	6767	87668	72.1	72.8
270.02002	3.80084818	14.5188012	3.52980032	14.54325	6635.25	6768	26683	72.1	72.8
275.02002	3.79176574	14.5171018	3.52980032	14.5425	6618.35	6769	8603	72.1	72.8
280.02002	3.78928933	14.5171018	3.52980032	14.5425	6618	6808	75857	72.1	72.8
285.02002	3.78112798	14.5171018	3.52980032	14.5425	6618.5	6808	85897	72.1	72.8
290.02002	3.78928933	14.5171018	3.52980032	14.5425	6630	6763	35787	72.1	72.8
295.02002	3.79480732	14.5171018	3.52980032	14.5425	6625.25	6774	80536	72.1	72.8
300.02002	3.80177031	14.5188012	3.53074418	14.5425	6632.35	6766	28205	72.1	72.8
305.02002	3.77655031	14.5171018	3.52980032	14.5425	6597.5	6769	8603	72.1	72.8
310.02002	3.82113348	14.5188012	3.52980032	14.5425	6584.5	6816	15813	72.1	72.8
315.02002	3.80032281	14.5201504	3.53074418	14.54175	6642	6813	14295	72.1	72.8
320.02002	3.79683512	14.5171018	3.52980032	14.54175	6595.25	6808	50446	72.1	72.8
325.02002	3.78163286	14.5171018	3.52980032	14.5425	6603.5	6767	45509	72.1	72.8
330.02002	3.80177031	14.5188012	3.53074418	14.5425	6603.5	6767	45509	72.1	72.8
335.02002	3.79144552	14.5171018	3.52980032	14.5425	6673.25	6816	85073	72.1	72.8
340.02002	3.79144552	14.5171018	3.52980032	14.5425	6677.25	6808	43992	72.1	72.8
345.02002	3.79144552	14.5171018	3.52980032	14.5425	6677.25	6808	43992	72.1	72.8
350.02002	3.81188524	14.5171018	3.52980032	14.54175	6671	6807	4541	72.1	72.8
355.02002	3.81188524	14.5171018	3.52980032	14.5425	6681.75	6804	12226	72.1	72.8
360.02002	3.80032281	14.5201504	3.53074418	14.54325	6681.5	6760	35034	72.1	72.8
365.02002	3.80032281	14.5201504	3.53074418	14.54325	6680.25	6760	35034	72.1	72.8
370.02002	3.80032281	14.5201504	3.53074418	14.54325	6681.75	6768	35034	72.1	72.8
375.02002	3.79144552	14.5171018	3.52980032	14.54325	6680.5	6768	25715	72.1	72.8
380.02002	3.79144552	14.5171018	3.52980032	14.54325	6681.5	6768	17712	72.1	72.8
385.02002	3.80032281	14.5201504	3.53074418	14.54325	6680.25	6768	76465	72.1	72.8
390.02002	3.77655031	14.5171018	3.52980032	14.5425	6680.5	6768	85897	72.1	72.8
395.02002	3.80032281	14.5201504	3.53074418	14.54325	6681	6768	85897	72.1	72.8

Spot/Probe Sensor Testing

TEST: KMA0772_8 2 May 1987 WDC SP002A

SECONDS	MARK OFF	MAIN DUCT GAS INLET	GAS INJECT	UNIT/TANKER	SINCE (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT	UNIT CELL	WHRT CELL
	DIFF (M/H/DO)	ABS (PPM)	DIFF (M/H/DO)	ABS (PPM)	OUTPUT (PPM)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
400.02002	3.79148332	14.5178715	3.32448976	14.54175	6692.5	5768.18181	72.5	72.5	72.6	0.00123
405.02002	3.805147	14.5148331	3.24448976	14.54175	6696.75	5763.67046	72.6	72.6	72.6	0.00123
410.02002	3.78803944	14.5171018	3.24448976	14.5425	6698.25	5803.65557	72.6	72.6	72.6	0.00123
415.02002	3.79176776	14.5163023	3.34574664	14.5425	6693.15	5803.7657	72.6	71.9	72.6	0.00123
420.02002	3.7938545	14.5171019	3.24448976	14.54175	6698.5	5807.71036	72.6	71.8	72.6	0.00123
425.02002	3.80177011	14.5178715	3.34571152	14.54175	6683.5	5805.86033	72.6	71.8	72.6	0.00123
430.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.25	5796.946	72.4	71.9	72.6	0.00123
435.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5815.14295	72.4	71.8	72.6	0.00123
440.02002	3.78803944	14.5171018	3.24448976	14.5425	6693.25	5809.84151	72.6	71.7	72.6	0.00123
445.02002	3.7938545	14.5171019	3.24448976	14.5425	6692.5	5809.50446	72.6	71.8	72.6	0.00123
450.02002	3.79487822	14.5188323	3.24448976	14.5425	6692.5	5809.50446	72.6	71.8	72.6	0.00123
455.02002	3.80177011	14.5178715	3.34571152	14.54175	6693.5	5803.40574	72.5	71.8	72.6	0.00123
460.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
465.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
470.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
475.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
480.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
485.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
490.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
495.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
500.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
505.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
510.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
515.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
520.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
525.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
530.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
535.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
540.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
545.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
550.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
555.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
560.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
565.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
570.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
575.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
580.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
585.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
590.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
595.02002	3.79176776	14.5163023	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123
600.02002	3.78487822	14.5188323	3.24448976	14.5425	6693.5	5803.40574	72.5	71.8	72.6	0.00123

Source: *Source: The Source*

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TEST TMS372_9 3 May 1987 REC-SP001												
RECORDER	MAIN DCT	MAIN DCT	GAS INJECT	GAS INJECT	WHITTAKER	SRC (FPM)	AMBIENT	FLAMMABLE	MAIN DCT	WHY CELL	WHY CELL	
	DIFF IN DEG	DIFF IN DEG	DIFF IN PSIA	DIFF IN PSIA	OUTPUT (FPM)		TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	(VOLTS)	
0.000000	3.760000	14.520000	0.500000	0.500000	14.520000	8.15	6.1955	72.5	72.4	72.5	0.000225	
5.000000	3.760000	14.520000	0.500000	0.500000	14.520000	4.535	5.194785	72.5	72.5	72.5	0.000224	
10.000000	3.760000	14.520000	0.500000	0.500000	14.520000	3.98	5.192118982	72.5	72.5	72.5	0.000315	
15.000000	3.760000	14.520000	0.500000	0.500000	14.520000	1.668	4.270132468	72.5	72.5	72.5	0.00052	
20.000000	3.760000	14.520000	0.500000	0.500000	14.520000	25.835	14.52312680	72.5	72.5	72.5	0.000872	
25.000000	3.760000	14.520000	0.500000	0.500000	14.520000	36.45	6.196615262	72.5	72.5	72.4	0.000881	
30.000000	3.760000	14.520000	0.500000	0.500000	14.520000	43.81	8.069132119	72.4	72.5	72.4	0.000853	
35.000000	3.760000	14.520000	0.500000	0.500000	14.520000	47.90	8.47215035	72.5	72.4	72.5	0.000858	
40.000000	3.760000	14.520000	0.500000	0.500000	14.520000	51.62	5.1649154308	72.5	72.5	72.5	0.000358	
45.000000	3.760000	14.520000	0.500000	0.500000	14.520000	54.08	7.5	72.5	72.5	71.8	0.001565	
50.000000	3.760000	14.520000	0.500000	0.500000	14.520000	59.00	8.56718127	72.2	72.4	71.7	0.001031	
55.000000	3.760000	14.520000	0.500000	0.500000	14.520000	57.13	7.5	72.5	72.5	72.4	0.001584	
60.000000	3.760000	14.520000	0.500000	0.500000	14.520000	58.10	8.563334453	72.5	72.5	71.7	0.001104	
65.000000	3.760000	14.520000	0.500000	0.500000	14.520000	58.65	5.053415622	72.2	72.5	72.4	0.001115	
70.000000	3.760000	14.520000	0.500000	0.500000	14.520000	59.31	5.1650218433	72.5	72.4	71.7	0.001115	
75.000000	3.760000	14.520000	0.500000	0.500000	14.520000	59.78	8.568730568	72.5	72.5	72.5	0.001124	
80.000000	3.760000	14.520000	0.500000	0.500000	14.520000	60.08	5.165718158	72.4	72.5	72.4	0.001128	
85.000000	3.760000	14.520000	0.500000	0.500000	14.520000	60.08	6.567145158	72.5	72.5	72.4	0.001131	
90.000000	3.760000	14.520000	0.500000	0.500000	14.520000	60.74	5.07140064	72.5	72.5	72.4	0.001131	
95.000000	3.760000	14.520000	0.500000	0.500000	14.520000	81.17	25.5	72.5	72.5	72.4	0.001141	
100.000000	3.760000	14.520000	0.500000	0.500000	14.520000	51.80	8.5680180033	72.5	72.5	72.5	0.001144	
105.000000	3.760000	14.520000	0.500000	0.500000	14.520000	61.48	5.1610181954	72.5	72.5	72.1	0.001148	
110.000000	3.760000	14.520000	0.500000	0.500000	14.520000	81.78	25.5	72.5	72.5	72.5	0.001151	
115.000000	3.760000	14.520000	0.500000	0.500000	14.520000	63.01	7.5	72.5	72.5	72.5	0.001151	
120.000000	3.760000	14.520000	0.500000	0.500000	14.520000	62.15	5.028156537	72.5	72.5	72.5	0.001151	
125.000000	3.760000	14.520000	0.500000	0.500000	14.520000	62.15	5.028156537	72.5	72.5	72.1	0.001151	
130.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
135.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
140.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
145.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
150.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
155.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
160.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
165.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
170.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
175.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
180.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
185.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
190.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
195.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	
200.000000	3.760000	14.520000	0.500000	0.500000	14.520000	82.21	25.5	72.5	72.5	72.5	0.001151	

TEST: KMS572_9_3 May 1897 VEC-SPDOK	SECONDS	MAIN DUCT	MAIN DUCT	GAS INJECT	OUTPUT (PPM)	5000 (PPM)	AMBIENT	PLANNABLE	MAIN DUCT	WHIRL CELL	WHIRL CELL
	DIFF (IN INCH)	ABS (PSIA)	DIFF (IN INCH)	ABS (PSIA)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
200.320002	3.81177443	14.5243881	14.54175	6337.5	6061.63224	72.5	72.8	72.5	72.5	72.5	0.001175
201.020002	3.77605955	14.5234935	14.5425	6384.75	6061.63943	72.5	72.8	72.5	72.5	72.5	0.001175
206.020002	3.79428255	14.5230940	14.5425	6389.75	6061.65996	72.5	72.8	72.5	72.5	72.5	0.001175
215.020002	3.79676195	14.5233653	14.54025	5951.75	6061.91541	72.4	72.9	72.5	72.5	72.5	0.001175
228.020002	3.81615135	14.5243951	14.54175	6405	6063.91957	72.5	72.8	72.5	72.5	72.5	0.001175
235.020002	3.81577849	14.5233485	14.54175	6410.75	6063.91717	72.5	72.8	72.5	72.5	72.5	0.001175
240.020002	3.82240402	14.5238485	14.5425	5411.25	6061.91508	72.8	72.5	72.5	72.5	72.5	0.001181
246.020002	3.8077654	14.5234945	14.5425	6412.75	6064.94596	72.5	72.9	72.5	72.5	72.5	0.001181
260.020002	3.805147	14.5230250	14.54325	6415	6138.91575	72.5	72.9	72.5	72.5	72.5	0.001182
245.020002	3.81671656	14.5238485	14.5425	6405.5	6110.91250	72.6	72.9	72.5	72.5	72.5	0.001183
259.020002	3.80822911	14.5234945	14.5425	6405.5	6116.90785	72.6	72.9	72.5	72.5	72.5	0.001183
255.020002	3.80239538	14.5234945	14.54775	6436.5	6112.91238	72.6	72.9	72.5	72.5	72.5	0.001186
260.020002	3.80852281	14.5245581	14.54775	6440.75	6113.90535	72.6	72.9	72.5	72.5	72.5	0.001187
265.020002	3.81485078	14.5245581	14.54775	6474	6114.91315	72.5	72.9	72.5	72.5	72.5	0.001187
271.020002	3.81965077	14.5238485	14.54775	5460.75	6063.90521	72.4	72.9	72.5	72.5	72.5	0.001192
275.020002	3.80177011	14.5230250	14.54025	6571	6010.91553	72.5	72.9	72.5	72.5	72.5	0.001192
289.020002	3.79487468	14.5234945	14.54025	6537.5	6017.94085	72.4	72.9	72.5	72.5	72.5	0.001201
295.020002	3.81807115	14.5238485	14.54775	5569.25	6015.91813	72.4	72.9	72.5	72.5	72.5	0.001204
290.06	3.81176307	14.5238485	14.54775	6470.5	6018.93701	72.4	72.9	72.5	72.5	72.5	0.001205
295.020002	3.80738754	14.5238485	14.54775	6577.5	6018.94151	72.4	72.9	72.5	72.5	72.5	0.001206
305.020002	3.81803715	14.5238485	14.54775	5569.25	6015.91813	72.4	72.9	72.5	72.5	72.5	0.001207
305.020002	3.8115348	14.5238485	14.54775	6060.75	6010.91185	72.5	72.9	72.5	72.5	72.5	0.001208
315.020002	3.79485955	14.5238485	14.54775	5591.75	6022.91554	72.5	72.9	72.5	72.5	72.5	0.001207
315.020002	3.81176307	14.5238485	14.54775	5560	6020.92885	72.5	72.9	72.5	72.5	72.5	0.001208
325.020002	3.8185524	14.5245581	14.54775	6060.25	6015.93575	72.5	72.9	72.5	72.5	72.5	0.001208
325.07091	3.79487468	14.5238485	14.54775	5560	6014.91177	72.5	72.9	72.5	72.5	72.5	0.001208
335.020002	3.79487468	14.5238485	14.54775	5560	6014.91177	72.5	72.9	72.5	72.5	72.5	0.001208
335.020002	3.81427551	14.5238485	14.54775	5560	6014.91177	72.5	72.9	72.5	72.5	72.5	0.001208
345.020002	3.79501949	14.5238485	14.54775	5560	6014.91177	72.5	72.9	72.5	72.5	72.5	0.001208
345.020002	3.8185524	14.5245581	14.54775	5560.25	6015.93575	72.5	72.9	72.5	72.5	72.5	0.001208
350.020002	3.81746818	14.5234945	14.54775	5560.25	6015.93575	72.7	72.9	72.5	72.5	72.5	0.001208
350.020002	3.81746818	14.5234945	14.54775	5560.25	6015.93575	72.7	72.9	72.5	72.5	72.5	0.001208
355.03	3.79614269	14.5238485	14.54775	5560	6014.91177	72.5	72.9	72.5	72.5	72.5	0.001208
360.020002	3.81427551	14.5238485	14.54775	5560	6014.91177	72.5	72.9	72.5	72.5	72.5	0.001208
365.020002	3.81116176	14.5238485	14.54775	5560	6014.91177	72.5	72.9	72.5	72.5	72.5	0.001208
375.020002	3.81385024	14.5238485	14.54775	5560.25	6015.93575	72.6	72.9	72.5	72.5	72.5	0.00121
385.020002	3.8374105	14.5238485	14.54775	5560.25	6015.93575	72.6	72.9	72.5	72.5	72.5	0.00121
395.020002	3.8553307	14.5245581	14.54775	5560.25	6015.93575	72.6	72.9	72.5	72.5	72.5	0.001213
395.020002	3.81522389	14.5238485	14.54775	5560.25	6015.93575	72.7	72.9	72.5	72.5	72.5	0.001213
395.020002	3.79755501	14.5238485	14.54775	5560.25	6015.93575	72.7	72.9	72.5	72.5	72.5	0.001213
395.020002	3.80822911	14.5245581	14.54775	5560.25	6015.93575	72.9	72.9	72.5	72.5	72.5	0.001213

Executive Summary

TEST (WAVE77.9, 9 May, 1857 WEST. SPOON)												
SECONDS	MAIN ELEC OFF IN (H) SEC (PSA)	MAIN DUCT H (H) SEC (PSA)	GAS INJECT DIFF IN (H) SEC (PSA)	GAS INJECT ABS (PSA)	WHITTAKER OUTPUT (PSA)	SMC (PSA)	AMBERT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WERT CELL TEMP (F)	WERT CELL VOLTS	
430.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
435.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
440.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
445.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
450.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
455.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
460.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
465.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
470.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
475.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
480.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
485.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
490.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
495.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
500.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
505.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
510.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
515.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
520.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
525.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
530.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
535.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
540.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
545.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
550.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
555.02002	5.63176307	3.23055930	14.54473	6627.78	6615.6733	72.7	73.1	73.1	72.5	72.5	0.001216	
560.02002	5.63176307	3.23055930	14.54473									

Snuff/Piece Sensor Testing

TEST: NWS272_2 2 May 1987 WBS-EPCCOL										
SEQUENCE	MAIN DUCT DIFF (IN H2O)	MAIN DUCT GAS INJECT ABS (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT WHRT CELL TEMP (F)	WHRT CELL VOLTS
805 02002	3.03534489	14.5323493	3.22510112	14.54235	8689.35	8784.64384	72.6	73.7	72.3	0.001222
810 02002	3.03738536	14.5273483	3.2283382	14.54235	8680.25	8787.87588	72.8	73.7	72.4	0.001222
815 03	3.03835877	14.5223483	3.2283382	14.54175	8683.35	8781.35781	72.5	73.7	72.5	0.001222
820 02002	3.03801848	14.5303486	3.22510112	14.54235	8684.75	8788.43141	72.4	73.7	72.5	0.001224
825 02002	3.03802281	14.5273483	3.22811112	14.54235	8686.5	8783.87486	72.5	73.7	72.5	0.001224
830 03	3.03821335	14.5233483	3.22447586	14.54175	8700.35	8784.80014	72.6	73.8	72.5	0.001225
835 02002	3.03803121	14.5303484	3.22510112	14.54335	8704.75	8770.34752	72.6	73.8	72.3	0.001225
840 04001	3.03828631	14.5273483	3.22872866	14.54335	8710.75	8780.54312	72.8	73.8	72.5	0.001225
845 02002	3.03827651	14.5303484	3.22575866	14.54335	8709.5	8780.28683	72.5	73.8	72.5	0.001224
850 02002	3.03836538	14.5303484	3.2283382	14.54335	8710	8788.43791	72.5	73.8	72.5	0.001225
855 02002	3.03861158	14.5303484	3.22872866	14.54335	8710.75	8784.13125	72.5	73.8	72.5	0.001225
860 10001	3.03838028	14.53031004	3.2283382	14.54335	8706.35	8791.8301	72.5	73.8	72.5	0.001224
865 02002	3.03828199	14.5318097	3.22572866	14.54335	8704	8788.50895	72.5	73.8	72.5	0.001223
870 02002	3.03848078	14.5318098	3.22872866	14.54235	8701.5	8787.87588	72.8	73.8	72.5	0.001224
875 10001	3.03837119	14.53031004	3.22575866	14.54335	8701.75	8789.28715	72.5	73.8	72.5	0.001225
880 02002	3.03852389	14.5323493	3.22572866	14.54335	8703.5	8792.10158	72.6	73.7	72.5	0.001223
885 03	3.03814082	14.53031004	3.22472866	14.54235	8704	8791.58381	72.8	73.8	72.5	0.001223
890 02002	3.03863844	14.5181566	3.22575866	14.54335	8702.35	8790.58896	72.7	73.7	72.4	0.001224
895 02002	3.03864587	14.5181566	3.22510112	14.54235	8704.5	8784.12678	72.7	73.8	72.5	0.001223
900 08002	3.02115348	14.5233483	3.2283382	14.54235	8704	8802.3382	72.7	73.8	72.5	0.001225
90% OF 15 min value										
905	SMC	8704	SMC	8802	8704	8802	72.7	73.8	72.5	0.001225
905	SMC	8704	SMC	8802	8704	8802	72.7	73.8	72.5	0.001225

TEST: RM0873_2_8 May '8873 WEC SPOX											
SECONDS	MAIN DUCT DIFF (IN/OUT)	MAIN DUCT ABS (PSIA)	DIFF (IN/OUT)	GAS FLOW ABS (FSC)	WHITAKER OUTPUT (PPM)	SAC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUST TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
0.0200169	3.43223584	14.5515846	0.00918034	14.4315	58.43	75.2	72.2	73.3	71.8	73.3	0.000317
0.0200195	3.43948624	14.5503813	0.83802115	14.4315	88.25	75.025	72.1	73.2	71.8	73.2	0.000217
19.02002	3.45474526	14.5393342	0.83468352	14.4315	140.325	75.325	72.1	73.3	71.8	73.1	0.000243
15.02002	3.44724202	14.5503813	0.83468352	14.4315	474.5	75.3	72.1	73.4	71.8	73.3	0.000296
20.02002	3.44059533	14.5503813	0.86467152	14.4315	333.75	72.0	72.2	73.4	71.8	73.2	0.000346
25.02002	3.44321086	14.5503813	0.85510595	14.4315	1274.25	150.575	72.5	73.4	71.8	73.1	0.000384
30.02002	3.43611243	14.5515846	0.85510595	14.4315	1272.75	125.6	72.2	73.4	71.8	73.1	0.000412
35.02002	3.44895837	14.5515846	0.85510595	14.4315	1415.75	142.275	72.3	73.4	71.8	73.3	0.000431
40.02002	3.42723338	14.5515846	0.85510595	14.4315	1528.5	152.8	72.3	73.4	71.8	73.1	0.000448
45.02002	3.42410703	14.5515846	0.85510595	14.4315	1538.75	160.0	72.4	73.4	71.8	73.1	0.000456
50.02002	3.43671878	14.5503813	0.85510595	14.4315	1683	164.5	72.4	73.4	71.8	73.2	0.000451
55.02002	3.43881243	14.5503813	0.85510595	14.4315	1682.25	168.175	72.5	73.4	71.8	73.3	0.000477
60.02002	3.43484176	14.5515846	0.85468352	14.4315	1740	170.75	72.4	73.4	71.8	73.2	0.000474
65.02002	3.417185163	14.5503813	0.85468352	14.4315	1768.5	171.8	72.4	73.4	71.8	73.3	0.000478
70.02002	3.464114331	14.5523342	0.85468352	14.4315	1777	173.075	72.5	73.4	71.8	73.3	0.000482
75.02002	3.417185163	14.5515846	0.85468352	14.4315	1798	174.25	72.3	73.4	71.8	73.1	0.000481
80.02002	3.43471892	14.5515846	0.85468352	14.4315	1811.75	174.5	72.5	73.4	71.8	73.2	0.000486
85.02002	3.43721266	14.5503813	0.85468352	14.4315	1827.25	173.75	72.2	73.4	71.8	73.3	0.000489
90.02002	3.43811351	14.5515846	0.85468352	14.4315	1841.25	175.875	72.3	73.4	71.8	73.2	0.000481
95.02002	3.455352984	14.5515846	0.85468352	14.4315	1845.5	175.7	72.1	73.4	71.8	73.1	0.000482
100.02002	3.44228513	14.5515846	0.85468352	14.4315	1850.75	177.2	72.1	73.4	71.8	73.1	0.000484
105.02002	3.43811351	14.5503813	0.85468352	14.4315	1871	178.5	72	73.4	71.8	73.2	0.000487
110.02002	3.41571204	14.5515846	0.85468352	14.4315	1877.5	178.4	71.9	73.4	71.8	73.3	0.000487
115.02002	3.43285848	14.5503813	0.85468352	14.4315	1886	179.25	71.9	73.4	71.8	73.2	0.000487
120.02002	3.424117103	14.5523342	0.85510595	14.4315	1888.75	178.5	72	73.4	71.9	73.1	0.000488
125.02002	3.43887115	14.5523342	0.85510595	14.4315	1895.5	178.8	72.2	73.4	71.8	73.3	0.000488
130.02002	3.4144798	14.5515846	0.85510595	14.4315	1902	178.5	72.2	73.4	71.8	73.2	0.000488
135.02002	3.43348666	14.5503813	0.85468352	14.4315	1902.75	178.75	72.4	73.4	71.8	73.3	0.000488
140.02002	3.44348666	14.5503813	0.85468352	14.4315	1902.75	178.75	72.4	73.4	71.8	73.3	0.000488
145.02002	3.4391351	14.5515846	0.85468352	14.4315	1912.5	178.5	72.5	73.4	71.8	73.3	0.000488
150.02002	3.4391351	14.5515846	0.85468352	14.4315	1917.5	180.25	72.4	73.4	72	73.3	0.000488
155.02002	3.4391351	14.5515846	0.85468352	14.4315	1917.5	180.25	72.4	73.4	72	73.3	0.000488
160.02002	3.4391351	14.5503813	0.85510595	14.4315	1927.25	180.75	72.5	73.4	72	73.3	0.000488
165.02002	3.4474254	14.5503813	0.85510595	14.4315	1928	180.75	72.5	73.6	71.9	73.2	0.000488
170.02002	3.4391351	14.5515846	0.85510595	14.4315	1928.5	180.75	72.4	73.6	71.9	73.3	0.000488
175.02002	3.4391351	14.5515846	0.85510595	14.4315	1938.25	180.75	72.5	73.6	72	73.1	0.000488
180.02002	3.4391351	14.5515846	0.85510595	14.4315	1941.5	180.5	72.5	73.6	71.9	73.1	0.000488
185.02002	3.4391351	14.5515846	0.85510595	14.4315	1941.5	180.5	72.5	73.6	71.9	73.1	0.000488
190.02002	3.41910487	14.5523342	0.85510595	14.4315	1948.25	181.25	72.6	73.6	72	73.3	0.000488
195.02002	3.41910487	14.5503813	0.85510595	14.4315	1947.5	181.25	72.6	73.6	72	73.3	0.000488
200.02002	3.42410703	14.5503813	0.85510595	14.4315	1950.5	180.875	72.7	73.4	72	73.5	0.000488

2025年12月1日

TEST NUMBER	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524
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StripPiece Sensor Testing

TEST: KW6873_2 5 May 1997 WEC-8PCC1											
SEQUENCE	MAIR DUCT DIFF (IN P2D)	MAIR DUCT ABS (PSIA)	GAS INJECT DIFF (IN P2D)	GAS INJECT ABS (PSIA)	WHTAKER OUTPUT (P2M)	SMC (P2M)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIR DUCT TEMP (F)	WHT CELL TEMP (F)	WHT CELL VOLTS
403.02002	3.42992384	14.5515845	0.85058352	14.43115	2001.75	1820.75	72.2	73.5	71.8	73.1	0.000515
405.02002	3.42410703	14.5513342	0.85038888	14.43228	2001.75	1810.75	72.1	73.4	71.8	73.0	0.000515
410.02002	3.41723208	14.5496357	0.84968288	14.43226	2001.75	1850.25	72.1	73.4	71.8	73.1	0.000515
415.02002	3.427348176	14.5515845	0.85038888	14.433	2001.25	1828.5	72	73.4	71.8	73.3	0.000514
420.02002	3.42755887	14.5515845	0.85058344	14.4315	2003.25	1831.5	72	73.4	71.8	73.2	0.000515
425.02002	3.44018405	14.5515845	0.85038888	14.4315	2003.5	1832	72	73.4	71.8	73.0	0.000515
430.02002	3.43811381	14.5515845	0.85038888	14.43228	2002.5	1834	72	73.5	71.8	72.9	0.000515
435.02002	3.44258513	14.5508346	0.85038888	14.43228	2002.5	1854.75	72	73.5	71.7	73.1	0.000515
440.02002	3.43286848	14.5508346	0.85038888	14.43228	2001.75	1855.75	72	73.5	71.8	73.3	0.000515
445.02002	3.427348176	14.5515845	0.85038888	14.4315	2003.25	1837.5	72	73.5	71.8	73.3	0.000515
450.02002	3.4585107	14.5508346	0.85058344	14.4315	2003.25	1837.5	72	73.5	71.8	73.0	0.000514
455.02002	3.46146904	14.5521342	0.85038888	14.43228	2003.25	1839.75	72	73.4	71.8	73.0	0.000515
460.02002	3.47424202	14.5521342	0.85038888	14.43228	2004.25	1837.75	72.2	73.4	71.8	73.2	0.000514
465.02002	3.44038405	14.5515845	0.85038888	14.43228	2004.5	1836.25	72.3	73.5	71.8	73.2	0.000513
470.02002	3.4537063	14.5508346	0.85038888	14.43228	2006.5	1835.75	72.5	73.5	71.8	73.0	0.000513
475.02002	3.43296081	14.5508346	0.85058344	14.433	2007.5	1838	72.4	73.4	71.8	73.0	0.000515
480.02002	3.43951243	14.5515845	0.85038888	14.4315	2007.5	1837.25	72.2	73.5	71.8	73.0	0.000515
485.02002	3.43935168	14.5521342	0.85038888	14.43228	2007.5	1838.5	72.1	73.5	71.8	73.0	0.000514
490.02002	3.43473562	14.54883357	0.85038888	14.43228	2006.75	1840.25	72.2	73.4	71.9	73.3	0.000514
495.02002	3.43473562	14.5508346	0.85058344	14.4315	2007.5	1837	72.2	73.5	71.9	73.2	0.000514
500.02002	3.41223889	14.5508346	0.85058344	14.4315	2008.5	1838.5	72.3	73.5	71.8	73.0	0.000516
505.02002	3.43551243	14.5515845	0.85038888	14.4315	2011.5	1836.5	72.5	73.5	71.8	73.0	0.000515
510.02002	3.43286848	14.5508346	0.85038888	14.4315	2012.25	1837	72.3	73.5	71.8	73.1	0.000515
515.02002	3.43411135	14.5515845	0.85038888	14.4315	2010.75	1836.25	72.3	73.5	71.8	73.2	0.000514
520.02002	3.4338888	14.5515845	0.85038888	14.433	2010.75	1837.75	72.3	73.5	71.8	73.2	0.000515
525.02002	3.43434668	14.5508346	0.85038888	14.433	2011.25	1835.75	72.3	73.5	71.8	73.0	0.000515
530.02002	3.44289513	14.5508346	0.85058344	14.43228	2012.75	1833.5	72.3	73.4	71.8	73.0	0.000516
535.02002	3.42410703	14.5515845	0.85038888	14.4315	2013.5	1834.75	72.3	73.5	71.8	73.1	0.000515
540.02002	3.427348176	14.5521342	0.85038888	14.43228	2013.5	1835.75	72.3	73.5	71.8	73.2	0.000516
545.02002	3.43223534	14.5515845	0.85038888	14.43228	2014.5	1834.75	72.2	73.4	71.8	73.1	0.000517
550.02002	3.43223534	14.5515845	0.85038888	14.433	2014.75	1836	72.3	73.5	71.8	72.9	0.000517
555.02002	3.427348176	14.5508346	0.85038888	14.4315	2012.5	1835.25	72.1	73.5	71.8	73.0	0.000516
560.02002	3.44038405	14.5515845	0.85038888	14.433	2011.75	1833.5	72	73.5	71.9	73.1	0.000516
565.02002	3.44742402	14.5496357	0.85038888	14.4315	2011.5	1837.5	72	73.5	71.8	73.0	0.000515
570.02002	3.44846904	14.5508346	0.85038888	14.4315	2010.75	1840.75	71.9	73.4	71.8	73.0	0.000515
575.02002	3.46474858	14.5508346	0.85058344	14.4315	2011.75	1841.5	71.8	73.4	71.8	73.1	0.000515
580.02002	3.44038405	14.5508346	0.85038888	14.43228	2012.5	1842.25	71.9	73.5	71.8	73.2	0.000515
585.02002	3.44289513	14.5521342	0.85038888	14.43228	2013	1845.25	71.8	73.5	71.7	73.2	0.000516
590.02002	3.44289513	14.5508346	0.85038888	14.43228	2013.5	1842.25	71.8	73.5	71.7	73.2	0.000516
595.02002	3.40724374	14.5515845	0.85038888	14.43228	2015	1843	71.7	73.5	71.8	72.9	0.000515

Sociopisce Server Testing

TEST: 00/05/22 2 8 day 1807 REC-30002L											
SECONDS	MAIN DUCT DIFF IN DEG	MAIN DUCT TEMP (F)	GAS INJECT DIFF IN DEG	GAS INJECT TEMP (F)	WHITTAKER OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
806.00002	3.450903654	14.43325	0.86500896	14.43325	184.135	71.7	73.5	71.7	72.8	0.00516	
806.39302	3.45348898	14.4516845	0.85488352	14.43225	201.43	184.0	71.8	73.5	71.7	73	0.00516
810.37	3.45359788	14.5008438	0.85494362	14.4315	251.675	183.9	71.8	73.5	71.7	73.2	0.00516
814.09302	3.45286813	14.5118545	0.86503896	14.4315	201.775	183.5	71.8	73.5	71.7	73.2	0.00517
821.79301	3.45008832	14.55008832	0.85500896	14.43225	201.7	183.1	71.8	73.5	71.7	72.9	0.00518
826.03	3.42416703	14.5623242	0.8538344	14.43225	201.7	183.75	71.6	73.5	71.7	72.9	0.00516
830.08	3.45161101	14.5900893	0.86503896	14.43225	201.65	183.2	71.8	73.5	71.7	73	0.00516
835.54301	3.4547333	14.5500893	0.86503896	14.43225	201.5	183.75	71.8	73.5	71.7	73.1	0.00516
848.03	3.4724202	14.5500893	0.86503896	14.4315	202.1	183.75	71.6	73.5	71.7	73.2	0.00517
850.54001	3.45038405	14.5500893	0.86503896	14.4315	202.2	183.35	71.7	73.5	71.7	73.1	0.00516
860.55502	3.45161881	14.5500893	0.86503896	14.4315	202.4	183.4	71.7	73.5	71.6	73	0.00517
866.03	3.42494176	14.5493357	0.85493357	14.4315	202.375	183.25	71.8	73.5	71.6	72.9	0.00516
869.04001	3.40910355	14.5493357	0.85493357	14.4315	202.4	183.8	71.8	73.5	71.6	72.9	0.00517
869.57501	3.42584176	14.5493357	0.85493357	14.43225	201.725	183.6	71.8	73.5	71.7	73.0	0.00517
870.02003	3.44008405	14.5493357	0.85493357	14.43225	202.4	182.9	71.8	73.5	71.7	72.9	0.00518
876.04001	3.44754202	14.5493357	0.85493357	14.4315	202.75	182.25	72	73.5	71.6	73	0.00518
880.57501	3.43843834	14.5470988	0.85503896	14.4315	202.75	182.2	72	73.5	71.7	73	0.00518
885.02002	3.41160163	14.5463616	0.85503896	14.43225	202.65	182.3	72	73.6	71.8	73.1	0.00517
886.03	3.43035513	14.5456616	0.86503896	14.4315	202.675	182.3	72	73.6	71.8	73	0.00517
895.33302	3.41785433	14.5403372	0.86493352	14.43225	202.6	182.1	72	73.6	71.9	73	0.00518
900.03002	3.42286813	14.5443378	0.86493352	14.43225	202.75	182.3	72.1	73.6	71.8	73.2	0.00519
907.35302	3.43061875	14.5484352	0.86483352	14.437	203.175	182.3	72.2	73.6	71.8	72.9	0.00519
910.35302	3.43544742	14.5483372	0.86503896	14.43225	203.175	182.3	72.2	73.5	71.8	73	0.00518
915.02002	3.43434947	14.5448358	0.86503896	14.43075	203.075	182.3	72.2	73.6	71.8	73.1	0.00519
920.03	3.43490932	14.5523342	0.86503896	14.43075	203.25	182.3	72.1	73.5	71.6	73.2	0.00518
925.03002	3.44038435	14.5456616	0.86493352	14.4315	203.825	181.5	72.1	73.5	71.8	73.1	0.00518
930.03002	3.42348176	14.55153845	0.86493352	14.4315	203.835	181.135	72.1	73.6	71.8		
930.03002	3.42348176	14.55153845	0.86493352	14.4315	203.835	181.135	72.1	73.6	71.8	72.9	0.00518
940.35302	3.43098932	14.5506833	0.85953444	14.43225	203.9	182.3	72.4	73.6	71.9	73	0.00519
940.35302	3.43098932	14.5506833	0.85953444	14.43225	203.9	182.3	72.4	73.6	71.9	73	0.00519
945.02002	3.44566051	14.5615645	0.85953444	14.4315	203.9	182.3	72.4	73.6	71.8	73.2	0.00519
950.35302	3.44539963	14.5606893	0.8593344	14.4315	203.975	182.3	72.4	73.6	71.6	73.1	0.00516
955.02002	3.42781885	14.5608933	0.86503896	14.4315	203.9	182.3	72.4	73.6	71.9	72.9	0.00518
960.03002	3.42233968	14.5603345	0.86503896	14.4315	203.5	181.835	72.5	73.6	71.9	73.2	0.00518
965.03002	3.42409395	14.5606833	0.86503896	14.4315	203.8	181.8	72.4	73.5	71.6	73.2	0.00522
970.35302	3.42783885	14.5603348	0.86503896	14.4315	203.5	182.3	72.4	73.6	71.8	72.9	0.00518
975.02002	3.42783885	14.5603348	0.86503896	14.4315	203.5	182.3	72.4	73.6	71.8	72.9	0.00518
980.03002	3.43411135	14.5603348	0.86503896	14.4315	203.9	182.3	72.6	73.5	71.9	73	0.00516
985.02002	3.42169595	14.5603348	0.86503896	14.43075	203.25	182.6	72.3	73.5	71.6	73.1	0.00517
990.35302	3.42573446	14.5603348	0.86493352	14.43225	203.25	181.635	72.3	73.5	71.5	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.75	181.835	72.5	73.5	71.8	73.2	0.00516
995.02002	3.43411135	14.5603348	0.86503896	14.4315	203.						

TEST NUMBER: 2 6 May 1997 WFC-SP-001											
SECONDS	MAIN DUCT DIFF (IN P20)	MAIN DUCT ABS (PSIA)	MAIN DUCT GAS INJECT DIFF (IN P20)	MAIN DUCT GAS INJECT ABS (PSIA)	GAS INJECT WHITTAKER OUTPUT (PPHM)	SWC (PPHM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	MAIN DUCT TEMP (F)	WALT CELL VOL (V)
000.00000	3.42233068	14.58333442	0.939593684	14.430775	20328.75	1820	72.8	73.5	71.6	72.9	0.000519
806.055002	3.42336668	14.5848306	0.95030868	14.43075	2031.75	1817.5	72.8	73.5	71.9	72.9	0.000519
810.540010	3.428464332	14.5515843	0.85530896	14.43075	2030.75	1818.25	72.7	73.5	71.9	73.8	0.000518
815.020002	3.43003973	14.5500953	0.85530896	14.4315	2028.25	1820.75	72.6	73.5	71.9	73.8	0.000518
820.055002	3.427387808	14.5500883	0.85656344	14.4334	2029.75	1828	72.5	73.5	71.6	72.9	0.000518
825.340010	3.43511351	14.54933357	0.86530896	14.43075	2026	1830	72.4	73.5	71.9	72.9	0.000519
830.72	3.43811783	14.55005349	0.85028072	14.43075	2037.75	1822	72.4	73.5	71.9	72.8	0.000519
836.055002	3.43266031	14.56001348	0.85530864	14.4315	2027.75	1832.75	72.4	73.5	72	72.9	0.000518
840.020002	3.43448834	14.54933357	0.85028072	14.4315	2027.75	1830.25	72.5	73.5	71.9	72.8	0.000518
845.050002	3.43011351	14.5500346	0.85030896	14.43075	2028	1833.75	72.6	73.5	72	72.8	0.000519
850.055002	3.42846382	14.5500883	0.85933384	14.4315	2028.5	1833.75	72.5	73.5	72	73	0.000518
856.05	3.422223122	14.55003348	0.855333754	14.4315	2026.5	1831.5	72.5	73.5	72	71.1	0.000518
860.02	3.43266031	14.5500346	0.85030896	14.4315	2022	1838.5	72.4	73.5	72	72.8	0.000518
866.055002	3.42915818	14.5500346	0.85933384	14.4315	2032.75	1828.25	72.4	73.5	72	73.8	0.000518
870.020002	3.433889715	14.5500346	0.863333866	14.43075	2033.75	1831.75	72.4	73.5	72	72.8	0.000518
875.02	3.435465024	14.5500346	0.86530896	14.4315	2031.75	1834.25	72.5	73.5	71.9	73.2	0.000518
880.055002	3.43588888	14.5523342	0.85933384	14.4315	2031.75	1833.25	72.5	73.5	71.9	73	0.000518
885.060602	3.43411131	14.5500346	0.8523072	14.4315	2033.5	1833.75	72.5	73.5	72	73	0.000518
890.06	3.430388368	14.5500346	0.85030896	14.4315	2032	1840	72.4	73.5	71.9	73	0.000518
895.020002	3.42973468	14.5500346	0.85030896	14.43075	2032.5	1831.75	72.3	73.5	71.8	72.9	0.000518
900.055002	3.43346175	14.548888	0.85333384	14.43225	2035.75	1825	72.3	73.5	71.9	72.8	0.000518

90% of 15 min value

SWC

to 2 min value -25% ?

SWC

1847.453355

SWC

1818.2

SWC

TEST: K05673_3 6 MAY 1987 VEC-SP-031									
SECONDS	DIFF (IN 100)	MAIN DUCT	GAS INJECT	WHITTAKER	SAC (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT	WHITTAKER
		ASS. PRESS	DIFF ON H2O: 435 (PSIA)	OUTPUT (PPM)		TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
									WHT CELL VOLTS
200.02002	3.47783063	14.548386	14.478	3805.5	3812.75	73.5	73.5	73.1	0.00797
205.02002	3.44368937	14.548386	14.47875	3845.25	3811.75	73.5	73.5	73.1	0.00798
210.02002	3.48724634	14.550084	14.47875	3848.5	3813	73.5	73.5	72.8	0.00798
215.02002	3.4305757	14.549357	14.47875	3882	3800	73.7	73.5	72	0.00799
220.02002	3.42348176	14.548386	14.47875	3853.5	3824.5	73.5	73.5	73.2	0.00798
225.02002	3.45161387	14.549357	14.47875	3854.5	3822.25	73.4	73.5	72.9	0.00798
230.02002	3.43473602	14.548386	14.47875	3887.75	3814.5	73.5	73.5	72.2	0.00801
235.02002	3.43074603	14.548386	14.47875	3882.25	3815.5	73.5	73.5	72.2	0.00801
240.02002	3.45094364	14.547864	14.47875	3869	3818	73.5	73.5	72.9	0.00802
245.02002	3.45776665	14.548386	14.47875	3876.5	3814.25	73.7	73.5	72.9	0.00803
250.02002	3.44474054	14.548386	14.47875	3881	3814.25	73.7	73.5	72.9	0.00803
255.02002	3.42798131	14.547864	14.47875	3883.5	3822.25	73.5	73.5	72.2	0.00803
260.02002	3.42778827	14.550084	14.47875	3881.75	3820	73.3	73.5	72.2	0.00804
265.02002	3.43343638	14.548386	14.47875	3887.5	3823.25	73.1	73.5	72.2	0.00804
270.02002	3.43776637	14.549357	14.47875	3889.5	3831.75	73.1	73.5	72.8	0.00804
275.02002	3.43776637	14.549357	14.47875	3889.5	3831.75	73.1	73.5	72.8	0.00804
280.02002	3.4311135	14.548386	14.47875	3880.5	3833	73.1	73.5	72.8	0.00805
285.02002	3.431317	14.548386	14.47875	3888.75	3831.75	73.2	73.5	72.8	0.00806
290.02002	3.43296381	14.548386	14.47875	3901.5	3834.5	73.2	73.5	73.1	0.00806
295.02002	3.42716385	14.547864	14.47875	3902.75	3825	73.1	73.1	73.1	0.00806
300.02002	3.4384182	14.548386	14.47875	3904.25	3826.5	73.1	73.5	72.8	0.00806
305.02002	3.43761027	14.549357	14.47875	3904.25	3832.5	73.1	73.7	72.2	0.00806
310.02002	3.42349178	14.548386	14.47875	3904.25	3834	73.1	73.7	73.1	0.00806
315.02002	3.44233885	14.548386	14.47875	3905.5	3837.5	73.2	73.1	73.1	0.00806
320.02002	3.42766885	14.547864	14.47875	3907.5	3835.25	73.1	73.7	72.2	0.00807
325.02002	3.45893884	14.549357	14.47875	3911.25	3832.25	73.1	73.2	72.9	0.00807
330.02002	3.41723803	14.548386	14.47875	3910.75	3826.5	73.1	73.7	72.2	0.00808
335.02002	3.45531033	14.547864	14.47875	3913	3827.75	73.3	73.7	73.1	0.00808
340.02002	3.45637093	14.548386	14.47875	3915.5	3834.5	73.5	73.7	73.1	0.00808
345.02002	3.42783885	14.548386	14.47875	3918.75	3827.75	73.4	73.8	72.9	0.00809
350.02002	3.42740384	14.549357	14.47875	3921	3827.25	73.4	73.8	72.2	0.00809
355.02002	3.41723803	14.548386	14.47875	3919.75	3826.5	73.5	73.7	72.2	0.00809
360.02002	3.4569863	14.549357	14.47875	3918.5	3833.5	73.8	73.7	73.1	0.00809
365.02002	3.44774202	14.547864	14.47875	3917.5	3832	73.6	73.7	72.9	0.00809
370.02002	3.42038541	14.548386	14.47875	3917.5	3828	73.5	73.8	72.2	0.00809
375.02002	3.42038541	14.548386	14.47875	3917.5	3828	73.5	73.8	72.2	0.00809
380.02002	3.42038541	14.548386	14.47875	3917.5	3828	73.5	73.8	72.2	0.00809
385.02002	3.44661675	14.547864	14.47875	3920.5	3831.25	73.8	73.8	73.1	0.00809
390.02002	3.41031508	14.548386	14.47875	3919.5	3837.5	73.8	73.8	72.2	0.00809
395.02002	3.43884382	14.548386	14.47875	3918.75	3835.75	73.6	73.8	72.2	0.0081

TEST: RW0873_3_8 Day 3857 MEC-SP00X												
SECONDS	MAIN INJECT	MAIN DUCT	GAS INJECT	GAS INJECT	WHITAKER	SAC (PPM)	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL	WHIT CELL	WHIT CELL
	DIFF (IN FLO)	ABS (PSIA)	DIFF (IN FLO)	ABS (PSIA)	OUTPUT (PPM)		TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
400.02002	3.4403608	14.5463372	1.72467086	14.4785	3821.75	3812.25	73.4	73.9	72.2	73.1	73.0	0.00081
405.02002	3.4278885	14.5478888	1.73717332	14.4785	3821.75	3837.75	73.2	73.8	72.2	73.1	73.0	0.00081
410.02002	3.44411587	14.5453876	1.72341588	14.4785	3821.75	3837.75	73.2	73.8	72.2	73.1	73.0	0.00081
415.02002	3.43255548	14.54404612	1.72404612	14.4785	3829.25	3833.25	73.1	73.8	72.2	73.1	73.0	0.00081
420.02002	3.43536673	14.5463372	1.72404612	14.4785	3831.75	3834.25	73.1	73.8	72.2	73.1	73.0	0.00081
425.06	3.44339611	14.5455876	1.72404612	14.4785	3834.25	3841.75	72.9	73.8	72.2	73.1	73.0	0.00081
430.02002	3.43248175	14.5483888	1.72404612	14.4785	3835.75	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
435.06002	3.43487431	14.5473954	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
440.02002	3.4278885	14.5453876	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
445.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
450.02002	3.4278885	14.5453876	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
455.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
460.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
465.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
470.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
475.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
480.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
485.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
490.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
495.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
500.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
505.02002	3.43248175	14.5483888	1.72404612	14.4785	3839.25	3841.75	72.8	73.8	72.2	73.1	73.0	0.00081
510.03	3.42448176	14.5463372	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
515.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
520.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
525.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
530.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
535.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
540.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
545.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
550.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
555.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
560.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
565.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
570.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
575.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
580.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
585.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
590.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
595.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081
599.02002	3.43248175	14.5483888	1.72404612	14.4785	3840.75	3840.75	73.0	73.9	72.2	73.1	73.0	0.00081

Spot/Flame Sensor Testing

TEST: RM0673_3_6 May 1887 VEC-SP001									
SECONDS	MAIN DUTY OFF IN FLOW ABS (PSIA)	MAIN DUTY DIFF IN FLOW ABS (PSIA)	GAZE INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUTY TEMP (F)	WHIT CELL NOV. TS
600.07001	3.44286512	14.5453504	1724045.12	3876.75	3873.35	73.9	74	72.2	72.9
600.07002	3.43477985	14.54063372	1723595	3861	3834.5	73.5	74	72.2	73.2
610.03	3.444471597	14.540586	1723598	3864	3833	73.3	74	72.2	73.2
610.02000	3.46787181	14.5400883	1728260	3861.5	3831.75	73.4	74	72.2	73.2
620.07002	3.42973448	14.54633372	1723576	3868.75	3824.5	73.6	74	72.2	73.8
620.02003	3.42453556	14.5473864	172467568	3867.75	3826.5	73.5	74	72.2	73
630.02002	3.43477985	14.54633372	1724045.12	3870	3833.35	73.6	74	72.2	73.1
630.07002	3.43037185	14.5477088	172467568	3869.5	3833.35	73.6	74	72.2	73.1
640.02002	3.43484824	14.54633372	1724045.12	3868.25	3834.25	73.5	74.1	72.2	73
640.02000	3.46574742	14.547086	1724045.12	3870.75	3841.5	73.5	74.1	72.2	73.1
650.07002	3.43037185	14.54633372	1724045.12	3868.25	3841.25	73.4	74.1	72.2	73.1
650.02002	3.42359546	14.5473864	172467568	3867.25	3840.5	73.3	74.1	72.2	73.1
660.07002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
670.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
680.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
690.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
700.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
710.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
720.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
730.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
740.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
750.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
760.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
770.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
780.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
790.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
800.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
810.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
820.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
830.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
840.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
850.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
860.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
870.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
880.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
890.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
900.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
910.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
920.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
930.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
940.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
950.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
960.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
970.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
980.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1
990.02002	3.42750585	14.5473864	172467568	3870.75	3840.5	73.4	74.1	72.2	73.1

TEST: K05873_3 8 May 1987 WDET-SF07A										
SECONDS	MAIN DUCT DIFF (IN H2O)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PPM)	SWC (PHR)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)
800.02002	3.44.48634	14.5433357	1.72467556	14.47875	3875.5	3853.25	73.1	74.2	72.1	72.8
805.02002	3.43285842	14.543886	1.723256	14.47875	3876.75	3850.25	73.1	74.2	72.1	72.8
810.06	3.43871878	14.5463357	1.72479434	14.47875	3878.25	3856.5	73.4	74.2	72.1	73.1
815.02002	3.42088089	14.5436569	1.72449512	14.47875	3878.5	3857	73.4	74.5	72.1	73.1
820.02002	3.41690376	14.54933172	1.72154316	14.478	3878.75	3858.25	73.5	74.5	72.1	73.2
825.05002	3.44285113	14.5433358	1.72677585	14.47875	3881.25	3852.5	73.5	74.5	72.2	72.9
830.02002	3.43279594	14.5433357	1.72279424	14.47875	3883.75	3851	73.5	74.5	72.2	72.8
835.02002	3.43411982	14.543886	1.72231858	14.47875	3887	3853.75	73.5	74.5	72.2	73.1
840.02002	3.41035158	14.543886	1.72215861	14.47755	3880.5	3854.5	73.5	74.5	72.2	73.0
845.02002	3.44339521	14.5478364	1.72687555	14.47875	3886.25	3851.25	73.5	74.5	72.2	72.9
850.02002	3.4341128	14.543886	1.72687555	14.47875	3888	3853.75	73.5	74.5	72.5	73
855.02002	3.41103153	14.5433357	1.72215861	14.47875	3884.5	3855.25	73.5	74.2	72.2	72.8
860.02002	3.44038035	14.543886	1.72215861	14.47875	3885.75	3853.25	73.5	74.5	72.2	72.9
865.02002	3.42910919	14.5478364	1.72687555	14.47875	3885	3844.25	73.5	74.5	72.2	73.1
870.03	3.44411587	14.543886	1.72215861	14.47875	3888	3845	73.5	74.5	72.2	73
875.02002	3.41673314	14.5440383	1.72279424	14.478	3890	3843.5	73.5	74.5	72.5	73
880.02002	3.42849582	14.5478364	1.72687555	14.478	3890	3843.5	73.5	74.5	72.5	73
885.07001	3.45327151	14.5478364	1.72687555	14.478	3882.75	3843.25	73.5	74.5	72.2	72.9
890.02002	3.43311135	14.5478364	1.72687555	14.478	3887	3837.5	73.5	74.5	72.2	73.1
895.02002	3.43369524	14.543886	1.72215861	14.478	3885.25	3842.5	73.5	74.5	72.2	73.2
900.06	3.45289845	14.5433357	1.72279424	14.47875	3883	3841.25	73.5	74.5	72.5	73.1
905.05 15 min delay 905% ?										
905.05	SWC	3883	SWC	3883	SWC	3883	SWC	3883	SWC	3883
905.05	SWC	3883	SWC	3883	SWC	3883	SWC	3883	SWC	3883

TEST: KART73_A 7 May 1857 MEC-SPOOL										
SECONDS	MAIN DUCT DIFF IN ABS (PSIA)	MAIN DUCT ABS (PSIA)	MAIN DUCT GAS INJECT DIFF IN-200	GAS INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT WAT DEL TEMP (F)	WAT CELL (VOLTS)
0.020000	3.34422533	14.6640278	2.63340784	14.8565	78.35	71.33	71.4	71.4	71.7	0.00022
5.020000	3.37333567	14.6640278	2.63340784	14.8565	62.2	73.25	71.3	71.5	70.9	0.000219
10.020000	3.33586555	14.6632782	2.63340784	14.8565	337.75	101.55	71.5	71.6	70.8	0.000296
15.020000	3.37071385	14.6647775	2.63333788	14.8565	1282.5	1215.35	71.4	71.5	70.8	0.004491
20.020000	3.37971286	14.6653771	2.63340784	14.8565	2257.5	3374.75	71.4	71.5	70.8	0.006604
25.020000	3.36839515	14.6631782	2.63334468	14.8565	3158	3833.25	71.4	71.5	70.7	0.006734
30.020000	3.41712358	14.6632782	2.63355238	14.8567	3765.75	4295	71.3	71.5	70.7	0.006812
35.020000	3.38338133	14.6647775	2.63718752	14.8597	4229	4763.75	71.4	71.5	70.9	0.006879
40.020000	3.402740785	14.6642275	2.63843354	14.86025	4541	5074.5	71.3	71.5	70.7	0.006918
45.020000	3.35158359	14.6647775	2.63346936	14.8585	4791.5	5265	71.3	71.5	70.8	0.006953
50.020000	3.33343433	14.6663775	2.63346936	14.8587	4893	5438.5	71.3	71.5	70.8	0.006976
55.020000	3.43713585	14.6647775	2.64118516	14.867	5381.25	5544.75	71.3	71.5	70.7	0.006985
60.020000	3.47125423	14.6647775	2.64314172	14.8577	5183.25	5628	71.3	71.5	70.6	0.010112
65.020000	3.42383548	14.6647775	2.64035415	14.85925	5286.25	5681	71.3	71.5	70.9	0.01023
70.020000	3.41347395	14.6640275	2.64035415	14.85825	5353	5723.25	71.4	71.5	70.7	0.01035
75.020000	3.42349178	14.6640275	2.64035415	14.8597	5417	5748.5	71.4	71.5	70.8	0.01043
80.020000	3.41683718	14.6647775	2.64035415	14.85925	5495	5771.5	71.5	71.6	70.8	0.01049
85.020000	3.44265213	14.6640278	2.64035415	14.8597	5493.75	5781.75	71.5	71.6	70.8	0.01055
90.020000	3.41913487	14.6640278	2.64193551	14.85975	5540.75	5765.5	71.6	71.6	70.8	0.0106
95.020000	3.42348175	14.6640278	2.64218104	14.867	5582	5802.5	71.5	71.6	70.6	0.01064
100.020000	3.43933578	14.6640278	2.64319104	14.854	5553.75	5803	71.5	71.6	70.8	0.01069
105.020000	3.43321564	14.6647775	2.64291545	14.8597	5615.75	5815	71.5	71.6	70.8	0.01073
110.020000	3.39847198	14.6640275	2.64291545	14.8595	5544.25	5525.25	71.6	71.6	70.8	0.01078
115.020000	3.4122359	14.6632782	2.64321848	14.85825	5638	5545.5	71.5	71.6	71.5	0.01078
120.020000	3.41913487	14.6647775	2.64344132	14.85825	5681	5582.25	71.5	71.6	71.4	0.0108
125.020000	3.39034245	14.6647775	2.64344132	14.85825	5635.5	5575.5	71.4	71.5	71.1	0.01085
130.020000	3.35158359	14.6647775	2.64344132	14.857	5715.75	5874.75	71.5	71.7	70.9	0.01095
135.020000	3.34038975	14.6640278	2.64291545	14.8595	5723.75	5883	71.5	71.6	70.8	0.01087
140.020000	3.39847198	14.6653771	2.64291545	14.8594	5734	5897.5	71.5	71.6	70.7	0.0108
145.020000	3.39847198	14.6653771	2.64291545	14.8594	5734	5897.5	71.5	71.6	70.7	0.0108
150.020000	3.39847198	14.6653771	2.64291545	14.8594	5734	5897.5	71.5	71.6	70.7	0.0108
155.020000	3.39847198	14.6653771	2.64291545	14.8594	5734	5897.5	71.5	71.6	70.7	0.0108
160.020000	3.39847198	14.6653771	2.64291545	14.8594	5734	5897.5	71.5	71.6	70.7	0.0108
165.020000	3.39847198	14.6653771	2.64291545	14.8594	5734	5897.5	71.5	71.6	70.7	0.0108
170.020000	3.4034677	14.6647775	2.6416959	14.8595	5734.75	5897.5	71.5	71.7	71.4	0.0108
175.020000	3.4034677	14.6647775	2.6416959	14.8595	5734.75	5897.5	71.5	71.7	71.5	0.0108
180.020000	3.39847198	14.6647775	2.6416959	14.8595	5734.75	5897.5	71.5	71.7	71.8	0.0108
185.020000	3.404752366	14.6632782	2.64321848	14.86775	5817.5	5908	71.5	71.7	71.8	0.0108
190.020000	3.36730736	14.6486416	2.64035415	14.8565	5616.75	5646	71.4	71.7	71.5	0.0108
195.020000	3.33096634	14.6347775	2.64035415	14.8565	5518.75	5518.75	71.4	71.7	71.5	0.0108
200.020000	3.41554893	14.6532787	2.64321848	14.86775	5915.75	5915	71.4	71.7	71.4	0.0108

TEST RUNS 7/5, 4, 7 May '98, WED-SPC02									
SECONDS	DIFF IN MAIN DUCT	MAIN DUCT GAS INJECT	GAS INJECT ABS (PSIA)	OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)
DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)	DIFF IN HOLD ABS (PSIA)
235.02002	3.403346775	14.6647775	2.64031472	14.884	5887.25	5817.8	71.4	70.6	71.8
235.15002	3.43058868	14.6640275	2.64034016	14.88625	5876.5	5816.5	71.5	70.6	71.8
210.13	3.4184766	14.663276	2.64034016	14.897	5878	5816.5	71.4	70.6	71.8
215.02002	3.42180536	14.6647775	2.64034016	14.89535	5883.75	5826.5	71.5	70.5	71.5
220.03002	3.41035106	14.664376	2.6415846	14.887	5888.25	5835.5	71.5	70.6	71.4
225.03002	3.40722674	14.6647775	2.6415846	14.887	5892	5840.25	71.6	70.8	71.5
230.03	3.43236403	14.6647775	2.64034016	14.897	5897.25	5850	71.5	70.8	71.4
235.02002	3.43722336	14.6647775	2.64034016	14.8925	5881.5	5851.5	71.7	71.6	71.4
240.03002	3.41180155	14.665571	2.64034016	14.89435	5893.25	5843.25	71.7	70.8	71.5
245.03	3.41705580	14.664376	2.6415846	14.897	5896.5	5846.5	71.7	70.8	71.5
250.03002	3.41705580	14.6647775	2.64034016	14.884	5891	5842	71.7	70.8	71.5
255.03002	3.40821077	14.6640176	2.64034016	14.8925	5819.75	5893	71.7	70.8	71.5
260.03002	3.40722674	14.664376	2.64034016	14.8925	5826.25	5846.5	71.7	70.8	71.5
265.03002	3.4172206	14.664376	2.64034016	14.887	5828	5857.25	71.7	70.8	71.4
270.03002	3.40310265	14.6647775	2.6394384	14.8925	5832.5	5841.5	71.7	70.8	71.5
275.03002	3.39847664	14.664376	2.6394384	14.897	5836.25	5841.5	71.7	70.8	71.5
280.03002	3.42265840	14.6647775	2.6394384	14.88625	5840.25	5838	71.7	70.7	71.4
285.03002	3.39595856	14.6653771	2.6394384	14.895	5842.25	5835.25	71.7	70.8	71.4
290.03002	3.39471334	14.6640176	2.6394384	14.88625	5848.25	5822.25	71.8	70.7	71.8
295.03002	3.41347744	14.6647775	2.6394384	14.8925	5850.5	5816.5	71.8	70.8	71.6
300.03002	3.39794560	14.664376	2.6394384	14.897	5853	5816.5	71.8	70.7	71.6
305.03002	3.37871288	14.6647775	2.6394384	14.884	5856.15	5815.5	71.4	70.7	71.5
310.03002	3.37553567	14.662988	2.6394384	14.89475	5856.25	5840.25	71.5	70.9	71.4
315.03002	3.36971718	14.662588	2.63791288	14.88775	5866.75	5808.75	71.5	70.8	71.5
320.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
325.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
330.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
335.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
340.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
345.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
350.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
355.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
360.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
365.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
370.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
375.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
380.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
385.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
390.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
395.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8
400.03002	3.36971718	14.662588	2.63791288	14.884	5874.75	5822.25	71.5	72	70.8

2000

TEST: PWS73_4 May 897 REC-SPOOL											
RECORDS	MAIN DUCT DIFF IN (IN)	MAIN DUCT ABS (PSIA)	MAIN DUCT GAS INJECT DIFF IN (IN)	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PPM)	SWC (PPM)	AMBIENT TEMP (F)	PLANNABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
400 02002	3.35744938	14.6640216	2.63718732	14.534	5387.5	5387.5	71.5	72.3	70.9	71.6	0.501128
400 03002	3.42339797	14.6932971	2.63696205	14.8925	5386.5	5386.5	70.7	72.2	70.5	71.5	0.501128
400 04002	3.31521184	14.6640278	2.63696338	14.8935	5385.5	5385.5	71.4	72.2	70.5	71.8	0.501138
410 02002	3.37346518	14.6647775	2.63696938	14.8935	5387	5387.5	71.4	72.2	70.8	71.5	0.501133
420 02002	3.38722042	14.6647775	2.63718752	14.954	6030.25	5870.75	71.3	72.2	70.5	71.3	0.501128
420 03002	3.38903502	14.6647775	2.63633864	14.9328	6003	5971.25	71.3	72.2	70.4	71.3	0.501128
430 02002	3.45161127	14.6640278	2.63551112	14.8325	5585.5	5371.5	71.3	72.2	70.4	71.5	0.501129
430 03002	3.43348608	14.6640278	2.63696205	14.8325	6003	5971.5	71.3	72.2	70.3	71.5	0.501128
440 02002	3.43488508	14.6647775	2.636468576	14.8525	5987.75	5583.25	71.3	72.3	70.3	71.8	0.501138
440 03002	3.40972582	14.6647775	2.634058332	14.8925	8020.35	5877.75	71.4	72.3	70.3	71.5	0.501128
445 02002	3.40472388	14.6647775	2.634388876	14.8925	5980.75	5866.75	71.4	72.3	70.5	71.4	0.501128
450 02002	3.39405407	14.6633782	2.63511112	14.8615	6002	5964.25	71.5	72.3	70.6	71.4	0.501128
460 02002	3.46711524	14.6653171	2.63466576	14.8615	8038.35	5986.5	71.5	72.3	70.6	71.4	0.501128
465 02002	3.42484178	14.6639285	2.63343488	14.8325	6008.25	5581.5	71.5	72.3	70.4	71.4	0.501128
470 02002	3.43115157	14.6637782	2.63468576	14.8525	5575.25	5844.5	71.4	72.3	70.4	71.5	0.501133
475 03002	3.42084785	14.6637782	2.63468576	14.8525	5632	5980	71.5	72.3	70.4	71.6	0.501131
480 02002	3.3747167	14.6653271	2.634889876	14.8945	8021.35	5964	71.4	72.3	70.3	71.5	0.501133
480 03002	3.37513087	14.6653288	2.63433488	14.8645	6002	5943.25	71.3	72.3	70.5	71.5	0.501133
490 02002	3.37346518	14.6647775	2.63343488	14.8645	8073.25	5941.5	71.2	72.3	70.4	71.3	0.501132
490 03002	3.38898566	14.6640278	2.63468576	14.8645	8035.5	5947.5	71.3	72.3	70.3	71.4	0.501133
500 02002	3.40810354	14.6653171	2.63468576	14.867	8038.75	5947.5	71.3	72.3	70.3	71.5	0.501133
500 03002	3.38592083	14.6640278	2.63468576	14.8625	8028.25	5938.5	71.4	72.4	70.3	71.6	0.501132
510 02002	3.38159887	14.6640278	2.63468576	14.8525	8028.25	5549	71.2	72.4	70.3	71.8	0.501133
515 02002	3.45472566	14.6640278	2.63468576	14.8525	9038.35	5935.25	71.3	72.3	70.3	71.8	0.501132
520 02002	3.39593868	14.6640278	2.63468576	14.8525	6007	5940.75	71.1	72.3	70.3	71.8	0.501132
525 02002	3.39294351	14.6653171	2.63468576	14.864	8023.5	5920.75	71.1	72.4	70.3	71.8	0.501133
530 02002	3.40758731	14.6647775	2.63468576	14.8625	6034.5	5915.25	71.1	72.4	70.3	71.5	0.501138
535 02002	3.42789885	14.6647775	2.634340318	14.8925	6037.75	5928.35	71.1	72.4	70.3	71.4	0.501138
540 02002	3.38485484	14.6647775	2.63468576	14.8925	6041.75	5934	71.1	72.4	70.2	71.6	0.501136
545 02002	3.40847526	14.6647775	2.63468576	14.8945	6045.25	5930.75	71.1	72.4	70.2	71.5	0.501136
550 02002	3.41720298	14.6647775	2.63468576	14.894	6048.25	5933.75	71.1	72.4	70.3	71.5	0.501137
555 02002	3.43107553	14.6647778	2.6331304	14.897	6045	5937.5	71.2	72.4	70.3	71.4	0.501187
560 02002	3.40972582	14.6650371	2.63468576	14.894	6047	5937.5	71.3	72.4	70.4	71.3	0.501137
565 02002	3.42548178	14.6640278	2.63468576	14.8938	6048.75	5938.25	71.3	72.4	70.5	71.4	0.501136
570 02002	3.42348178	14.6640278	2.6331304	14.8938	6043.75	5905	71.3	72.4	70.6	71.6	0.501136
575 02002	3.43248178	14.6647778	2.6331304	14.8938	6046.25	5903.75	71.3	72.4	70.7	71.5	0.501144
580 02002	3.41001095	14.6640278	2.634060332	14.8935	5963	5869.75	71.4	72.4	70.9	71.3	0.501138
585 02002	3.43474692	14.6647778	2.633200444	14.884	6045.25	5905	71.5	72.4	70.9	71.3	0.501148
590 02002	3.40972582	14.6647778	2.63468576	14.8935	6064.75	5925.75	71.5	72.5	70.9	71.4	0.501138
595 02002	3.397764137	14.6637782	2.634060332	14.89325	5902	5925	71.6	72.6	71.1	71.5	0.501137

Spot/Place Sensor Testing

TEST N0773_4_7 May 1997 USC SPQOL										
SECONDS	MAIN DUCT DIFF IN FIDT ABS (PSIA)	MAIN DUCT DIFF IN FIDT ABS (PSIA)	GAS INJECT ABS (PSIA)	WORTAKER OUTPUT (PPM)	SMC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
805.07003	3.40813035	14.5647775	2.632184	4.63325	6084	5024.75	71.5	72.9	71	71.5
806.04061	3.43411135	14.8640278	2.632184	4.63325	6084.35	5834.5	71.7	72.7	71	71.6
810.01002	3.39722943	14.8565371	2.6320844	4.63325	6084.5	5841.25	71.7	72.8	71	71.4
815.03003	3.39908633	14.583271	2.632184	4.63325	6084.25	5838.25	71.7	72.8	71.1	71.4
820.08	3.42763865	14.8940278	2.6320844	4.63325	6082.5	5857.5	71.8	72.8	71.1	71.3
825.03003	3.40472069	14.8547775	2.632184	4.63325	6078.5	5661.5	71.8	72.8	71.2	71.3
830.02002	3.39684706	14.5831762	2.632184	4.63325	6085.25	5903.5	71.9	72.9	71.5	71.4
835.05002	3.41180163	14.8940278	2.632184	4.63325	6082	5866.25	71.9	72.9	71.2	71.4
840.03002	3.42785663	14.8940278	2.6320844	4.63325	6084	5866.25	71.9	72.9	71.2	71.4
845.03002	3.42226563	14.5840278	2.6320844	4.63325	6084	5865.5	72	72.9	71.3	71.3
850.013	3.42410703	14.8940278	2.632184	4.63325	6085.25	5849.75	71.9	72.9	71	71.3
855.02002	3.42348178	14.6940278	2.632184	4.63325	6083.25	5884.75	71.9	72.9	71	71.3
860.02002	3.42035841	14.8947775	2.6320844	4.63325	6081.5	5616.5	71.9	72.9	71	71.4
865.03002	3.39895568	14.6940278	2.632184	4.63325	6081.5	5894.5	71.8	72.9	71	71.4
870.02002	3.40159131	14.6940278	2.632184	4.63325	6081.25	5881	71.8	72.9	71.1	71.3
875.02002	3.40159131	14.6940278	2.632184	4.63325	6081.75	5881	71.8	72.9	71.1	71.3
880.02002	3.41746403	14.8947775	2.632184	4.63325	6086.5	5887.75	71.8	72.9	71	71.3
885.04001	3.3997715	14.6947775	2.6320844	4.63325	6085.25	5894	71.7	72.9	71	71.6
890.02002	3.37793703	14.8940278	2.632184	4.63325	6083	5836.75	71.7	72.9	70.9	71.3
895.07002	3.42295945	14.6940278	2.6320844	4.63325	6087.5	5910.75	71.8	72.9	70.9	71.6
900.02002	3.42410703	14.8947775	2.632184	4.63325	6087.25	5912.5	71.8	72.9	70.9	71.6
905.02002	3.39034265	14.8947775	2.632184	4.63325	6085.75	5894.75	71.5	72.9	71	71.3
80% OF 15 min value										90% OF 15 min value
8 min value										8 min value
5 min value										5 min value
5/27/93	33.78.225			PA35	PA35			PA35		

90% On 15 min value

18.2 min value > 90% ?

WHIT SMC

WHIT SMC

PASS

PASS

SocialPace Sensor Testing

TEST R3227, 1 22 May 1987 MED-SPCCL										
SECONDS	MAIN DUCT DIFF IN H2O ASS PRESS	MAIN DUCT DIFF IN H2O ASS PRESS	GAS INJECT DIFF IN H2O ASS PRESS	WHITAXER OUTPU-JT (PSIA)	DETRONIC (PPHM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL INACT (F)
200.01988	3.80227335	14.431645	0.382350296	208.05	0.678	73.4	72.7	71.8	73.9	0.002333
205.01986	3.78663008	14.431645	0.38328272	205.15	0.676	73.3	72.7	72.1	73.8	0.002233
210.01986	3.79576796	14.431646	0.38280996	208.65	0.678	73.1	72.7	72.7	73.7	0.002334
216.01988	3.79442514	14.431646	0.381703036	208.925	0.7	73	72.7	72.7	73.8	0.002233
220.01989	3.79561741	14.431646	0.385071068	209.675	0.678	72.8	72.7	71.9	73.5	0.002233
226.01986	3.79176579	14.431645	0.385374848	209.0	0.678	73.6	72.7	72.7	73.6	0.002333
230.01988	3.78188576	14.431646	0.384273684	208.425	0.7	72.7	72.7	72.7	73.8	0.002233
236.01986	3.78188576	14.431643	0.38476688	209.755	0.676	72.6	72.7	72.1	73.8	0.002233
240.01989	3.78034808	14.431645	0.383765176	209.55	0.676	72.6	72.7	72.1	73.6	0.002333
246.01986	3.78034808	14.431645	0.384273684	210.825	0.678	72.5	72.7	72.1	73.6	0.002333
250.01989	3.78188576	14.431645	0.383765176	209.6	0.678	72.5	72.7	72.1	73.4	0.002233
256.01986	3.78188576	14.431645	0.383765176	210.55	0.7	72.4	72.7	72.1	73.6	0.002333
260.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
266.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
270.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
276.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
280.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
286.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
290.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
296.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
300.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
306.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
310.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
316.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
320.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
326.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
330.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
336.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
340.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
346.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
350.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
356.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
360.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
366.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
370.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
376.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
380.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
386.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
390.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
396.01986	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333
400.01989	3.78218874	14.431645	0.38280996	208.25	0.678	72.4	72.7	72.1	73.7	0.002333

Spencer, David

TEST: K32271 22 May 1997 WED 5:00:01												
SECONDS	MAIN DUCT DIFF (R HZ)	MAIN DUCT ABS (PSIA)	GAS FUELED DIFF (IN H2O)	WHITAKER OUTPUT (PPHM)	DETRONIC (PPM)	AMBERT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHT CELL TEMP (F)	WHT CELL VOL (V)		
440.01989	3.9302013	14.4320354	0.083329297	212.726	0.676	73.6	72.7	73.1	73.4	0.000234		
408.01989	3.9195336	14.4320446	0.086977858	211.6	0.7	73.6	72.7	73.1	73.8	0.000235		
416.01989	3.9317937	14.4331443	0.084454175	212.7	0.7	73.7	72.8	73.1	73.4	0.000234		
413.01989	3.89894003	14.4323948	0.082768472	211.575	0.676	73.6	72.7	73.1	73.4	0.000234		
421.01989	3.91460078	14.4308964	0.0833969812	212.83	0.7	73.7	72.7	73.1	73.5	0.000234		
425.01989	3.91644452	14.4309261	0.084704336	212.73	0.7	73.7	72.7	73.1	73.5	0.000234		
430.01989	3.91869394	14.4320954	0.0834653468	214.175	0.676	73.6	72.7	73.1	73.7	0.000233		
435.01989	3.8966408	14.4323644	0.083679152	214.025	0.675	73.6	72.7	73.1	73.7	0.000233		
440.01989	3.9161512	14.4321645	0.0831427134	213.63	0.7	73.7	72.7	73.1	73.4	0.000233		
445.01989	3.83740918	14.4308954	0.0823272654	213.825	0.7	73.7	72.7	73.1	73.5	0.000233		
480.01989	3.82960772	14.4301456	0.083326638	213.675	0.676	73.6	72.7	73.1	73.7	0.000234		
455.01989	3.9067727	14.4320948	0.08369956	213.35	0.676	73.6	72.7	73.1	73.6	0.000234		
460.01989	3.91421561	14.4320954	0.084592943	212.68	0.676	73.6	72.7	73.1	73.7	0.000234		
485.01989	3.82570091	14.4301456	0.0827561812	213.363	0.675	73.6	72.7	73.1	73.4	0.000234		
475.01989	3.91020985	14.4323948	0.0832265924	213.3075	0.676	73.6	72.7	73.1	73.4	0.000234		
470.01989	3.91746032	14.4320954	0.0823272654	213.525	0.7	73.6	72.7	73.1	73.5	0.000234		
480.01989	3.92458782	14.4321945	0.0827561812	213.68	0.7	73.6	72.7	73.1	73.7	0.000234		
485.01989	3.90566063	14.4321945	0.0827561812	212.825	0.676	73.6	72.8	73.1	73.5	0.000234		
455.01989	3.92177875	14.4321945	0.0836161616	212.86	0.676	73.6	72.8	73.1	73.5	0.000234		
460.01989	3.91954466	14.4323948	0.0836161616	212.86	0.676	73.6	72.8	73.1	73.5	0.000234		
3.901147	14.4308954	0.0811407386	14.30175	213.575	0.675	73.6	72.8	73.1	73.7	0.000233		
505.01989	3.92893672	14.4321945	0.0834827542	213.075	0.675	73.6	72.8	73.1	73.7	0.000233		
515.01989	3.92591741	14.4321945	0.083315648	213.075	0.675	73.6	72.8	73.1	73.8	0.000234		
510.01989	3.91461078	14.4321945	0.083315648	213.075	0.675	73.6	72.8	73.1	73.8	0.000234		
530.01989	3.9466476	14.4321945	0.0836161616	213.36	0.7	73.6	72.8	73.1	73.8	0.000234		
535.01989	3.97864376	14.4321945	0.083315616	213.4	0.7	73.6	72.8	73.1	73.8	0.000234		
520.01989	3.91927625	14.4323948	0.0923929328	211.675	0.726	73.2	72.8	72.1	73.6	0.000334		
530.01989	3.9394747	14.4321645	0.083077448	215.375	0.7	73.3	72.8	72.1	73.6	0.000334		
535.01989	3.9139574	14.4301546	0.082515786	215.325	0.7	72.9	72.8	72.1	73.7	0.000334		
540.01989	3.91327757	14.4325948	0.0829563194	214.025	0.7	73.3	72.8	72.1	73.7	0.000334		
545.01989	3.91677858	14.4308954	0.082765472	213.025	0.7	73.3	72.8	72.1	73.7	0.000334		
530.01989	3.91118915	14.4321645	0.0829633154	214.304	0.7	73.3	72.8	72.1	73.6	0.000334		
540.01989	3.9091627	14.4321645	0.0829633154	214.304	0.7	73.3	72.8	72.1	73.6	0.000334		
545.01989	3.92354037	14.4321645	0.0829633154	214.304	0.7	73.3	72.8	72.1	73.6	0.000334		
535.01989	3.91114915	14.4301456	0.0829633154	214.304	0.675	73.3	72.8	72.1	73.6	0.000334		
570.01989	3.97176315	14.4323948	0.0821764768	214.304	0.675	73.3	72.8	72.1	73.6	0.000334		
575.01989	3.96565173	14.4308954	0.0821764768	214.304	0.675	73.3	72.8	72.1	73.6	0.000334		
585.01989	3.90851741	14.4321945	0.082515296	216.825	0.675	73.3	72.8	72.1	73.7	0.000334		
590.01989	3.9051938	14.4321945	0.082515296	216.825	0.675	73.3	72.8	72.1	73.7	0.000334		
595.01989	3.91421886	14.4323948	0.082515296	214.175	0.675	73.3	72.8	72.1	73.7	0.000334		
590.01989	3.91860288	14.4321945	0.082515296	216.825	0.675	73.3	72.8	72.1	73.7	0.000334		
595.01989	3.92360288	14.4323948	0.082515296	216.825	0.675	73.3	72.8	72.1	73.7	0.000334		

Synthetic Sensor Testing

TEST: K2021_1_12 May 1997 MCC-SPDOL											
SECONDS	MAIN DUCT DIFF (IN H2O) ABS (PSIA)	MAIN DUCT DIFF (IN H2O) ABS (PSIA)	GAS INJECT DIFF (IN H2O) ABS (PSIA)	GAS INJECT DIFF (IN H2O) ABS (PSIA)	WHITTAKER OUTPUT (PSIA)	DETRONIC (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
800.01989	3.78239108	14.4278988	0.08332328	14.30325	217.95	0.7	72.4	72.8	72.8	73.4	0.000234
803.01989	3.78239108	14.43278898	0.08332328	14.30325	217.95	0.85	72.5	72.8	72.8	73.6	0.000234
810.01989	3.82039211	14.4271473	0.08332328	14.30325	217.2	0.85	72.5	72.8	72.8	73.6	0.000234
815.01989	3.89584335	14.431458	0.081327312	14.3025	216.875	0.875	73	72.8	72.8	73.8	0.000234
820.01989	3.82177875	14.4388485	0.083077486	14.304	216.475	0.7	73.1	72.8	72.8	73.5	0.000234
825.01989	3.82615564	14.4339641	0.08332328	14.30325	217.95	0.875	73.2	72.8	72.8	73.7	0.000234
830.01989	3.85177011	14.4298485	0.081327312	14.30325	216	0.8	73.2	72.8	72.8	73.8	0.000234
835.01989	3.85322055	14.4388485	0.08332328	14.30325	217.95	0.875	73.2	72.8	72.8	73.5	0.000234
840.01989	3.82177875	14.4339641	0.08332328	14.30325	217.95	0.875	73	72.8	72.8	73.2	0.000234
845.01989	3.89885104	14.4388485	0.082765472	14.3025	216.875	0.85	73	72.8	72.8	73.2	0.000234
850.01989	3.79814768	14.4388485	0.082923104	14.30175	216.575	0.875	73.1	72.8	72.8	73.3	0.000234
855.01989	3.79814768	14.4388485	0.082923104	14.30175	216.575	0.875	73.1	72.8	72.8	73.3	0.000234
860.01989	3.81582805	14.4388485	0.082940384	14.3025	216.5	0.8	73	72.8	72.8	73.7	0.000234
865.08	3.78989898	14.4339641	0.08340232	14.30175	216.45	0.875	72.8	72.8	72.8	73.2	0.000234
870.01989	3.80216536	14.4271473	0.081327312	14.3025	216.8	0.875	72.8	72.8	72.8	73.4	0.000234
875.01989	3.79775979	14.4371473	0.081327312	14.3025	216.375	0.875	72.8	72.8	72.8	73.4	0.000234
880.01989	3.83382834	14.432946	0.081327312	14.30325	216.175	0.86	73	72.8	72.8	73.7	0.000234
885.01989	3.81327767	14.4298485	0.081327312	14.304	216.55	0.875	73.1	72.8	72.8	73.8	0.000234
890.01989	3.84461374	14.4301458	0.082923104	14.3025	216.56	0.85	73.6	72.8	72.8	73.6	0.000234
895.01989	3.80664538	14.4309081	0.08140332	14.3025	217.25	0.7	73.7	72.8	72.8	73.2	0.000234
900.01989	3.80864538	14.4298485	0.081327312	14.30175	216.15	0.7	73.8	72.8	72.8	73.8	0.000234
30% OF 15 min value											
15.2 min value > 90% ?											
WHIT											
Defective											
Unit											
Defective											
Passes											
Passes											
14.438											
0.838											
PA85											
PA85											
PA85											

2000-01-01

TEST: 6/22/21 12:22 May 1987 WEC-SP5201												
SECONDS	MAIN DUCT		GAS INJECT		3AS INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPM)	RETROIC TEMP (PPM)	FLAMMABLE		MAIN DUCT		WHIT CELL VOLTS
	DIFF IN (R)	ABS (PSIA)	DIFF IN (R)	ABS (PSIA)				GAS TEMP (F)	TEMP (F)			
0.000180	3.5002280	14.3002361	0.0002361	14.3002361	14.3002361	57.375	0.63	73	73	73.3	73.3	0.000236
5.0000196	3.400236516	14.40023651	0.00023651	14.40023651	14.40023651	58.46	0.676	72.0	73	72.3	73.2	0.000236
10.000000	3.700237147	14.400236868	0.000236868	14.400236868	14.400236868	43.3	0.676	73.2	73	73.3	73.3	0.000236
15.000000	3.780237417	14.400236868	0.000236868	14.400236868	14.400236868	86.375	0.7	73.3	73	73.3	73.3	0.000236
20.000000	3.800237071	14.400237147	0.000237147	14.400237147	14.400237147	120.625	0.676	73.2	73	72.6	73.6	0.000236
25.000000	3.91140616	14.400236945	0.000236945	14.400236945	14.400236945	128.375	0.676	73.4	73	71.4	73.4	0.000236
30.000000	3.80023683	14.400236868	0.000236868	14.400236868	14.400236868	180.325	0.676	73.4	73	72.4	73.4	0.000236
35.000000	3.84115213	14.400236868	0.000236868	14.400236868	14.400236868	194.325	0.676	73.5	73	72.3	73.2	0.000236
40.000000	3.94127767	14.400236868	0.000236868	14.400236868	14.400236868	178.375	0.676	73.5	73	72.3	73.2	0.000236
45.000000	3.830236825	14.400236868	0.000236868	14.400236868	14.400236868	185.875	0.7	73.7	73	72.2	73.2	0.000236
50.000000	3.82115348	14.400236868	0.000236868	14.400236868	14.400236868	190.475	0.676	73.6	73	72.4	73.6	0.000236
55.000000	3.91174443	14.400236945	0.000236945	14.400236945	14.400236945	164.7	0.55	73.9	73	71.4	73.4	0.000236
60.000000	3.830236545	14.400236868	0.000236868	14.400236868	14.400236868	200.15	0.676	73.0	73	72.4	73.2	0.000236
65.000000	3.800236538	14.400236868	0.000236868	14.400236868	14.400236868	203.35	0.676	73.2	73	72.3	73.3	0.000236
70.000000	3.77000000	14.400236868	0.000236868	14.400236868	14.400236868	203.35	0.676	73.2	73	72.3	73.3	0.000236
75.000000	3.82000000	14.400236868	0.000236868	14.400236868	14.400236868	203.35	0.676	73.2	73	72.3	73.3	0.000236
80.000000	3.83179937	14.400236868	0.000236868	14.400236868	14.400236868	203.4	0.676	73.6	73	72.3	73.6	0.000236
85.000000	3.81115815	14.400236868	0.000236868	14.400236868	14.400236868	203.46	0.676	74	73	73.8	73.8	0.000236
90.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	208.8	0.65	74.1	73	71.4	73.4	0.000236
95.000000	3.76000000	14.400236868	0.000236868	14.400236868	14.400236868	213.35	0.65	74.2	73	72.4	73.2	0.000236
100.000000	3.78000000	14.400236868	0.000236868	14.400236868	14.400236868	213.35	0.676	74.2	73	72.3	73.3	0.000236
105.000000	3.76000000	14.400236868	0.000236868	14.400236868	14.400236868	211.325	0.676	74.1	73	72.3	73.3	0.000236
110.000000	3.76000000	14.400236868	0.000236868	14.400236868	14.400236868	211.325	0.676	74.2	73	72.3	73.3	0.000236
115.000000	3.76000000	14.400236868	0.000236868	14.400236868	14.400236868	211.325	0.676	74.2	73	72.3	73.3	0.000236
120.000000	3.82000000	14.400236868	0.000236868	14.400236868	14.400236868	218.675	0.676	73.7	73	72.3	73.3	0.000236
125.000000	3.82000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
130.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
135.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
140.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
145.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
150.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
155.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
160.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
165.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
170.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
175.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
180.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
185.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
190.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
195.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236
200.000000	3.86000000	14.400236868	0.000236868	14.400236868	14.400236868	217.375	0.676	73.7	73	72.3	73.3	0.000236

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TEST# 46227-2, 21 May 187 MED-SECOND												
SECONDS	MAIN DUCT DIFF IN (H) (PSIA)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF IN (H) (PSIA)	GAS INJECT ABS (PSIA)	WATERTAKE OUTPUT (PPM)	DETRONIC AMBIENT TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS		
200.54001	3.7605149	14.4253661	0.027280238	14.298	321.675	0.7	73.4	73.3	73.3	0.003336		
205.15101	3.91027767	14.4386485	0.063013545	14.29875	222.475	0.675	73.4	73.4	73.5	0.003235		
210.02301	3.90177811	14.4386485	0.063020316	14.2995	329.18	0.7	73.3	73.4	73.5	0.003237		
215.01301	3.81527351	14.4286465	0.082018296	14.29875	223.525	0.675	73.1	73.3	73.3	0.003236		
220.21101	3.81740186	14.4286465	0.082068391	14.29875	223.76	0.675	73.1	73.3	73.3	0.003236		
225.02501	3.76506146	14.4286465	0.0630014544	14.2969	233.825	0.675	72.6	73.3	73.3	0.003236		
230.01301	3.80177011	14.4386485	0.082080788	14.2995	223.55	0.676	72.8	73.3	73.3	0.003236		
235.02801	3.80177011	14.4386485	0.0820373694	14.29875	223.45	0.675	72.7	73.3	73.3	0.003236		
240.101	3.8081437	14.4301456	0.082078132	14.2995	324.68	0.7	72.7	73.3	73.3	0.003236		
245.02501	3.80502173	14.4271869	0.081888936	14.29875	225.6	0.7	72.7	73.1	73.3	0.003236		
250.02801	3.80802281	14.4271873	0.082102923	14.30025	224.625	0.65	72.7	73.1	73.3	0.003236		
255.01301	3.80236538	14.4301456	0.082046584	14.2989	234.6	0.7	72.7	73.1	73.3	0.003236		
260.02501	3.8081437	14.4386485	0.081814334	14.30035	234.85	0.7	72.7	73.1	73.4	0.003236		
265.01301	3.81140827	14.4301456	0.082065303	14.29875	235.825	0.65	72.7	73.1	73.4	0.003236		
270.02801	3.81602771	14.4291591	0.082078187	14.2995	234.875	0.7	72.7	73.1	73.4	0.003236		
275.02801	3.81602771	14.4291591	0.082078187	14.2995	234.875	0.7	72.7	73.1	73.4	0.003236		
280.02801	3.81401586	14.4286465	0.082327864	14.30035	225.125	0.73	73.8	73.3	73.8	0.003237		
285.02801	3.82115240	14.4286465	0.082327864	14.30025	225.825	0.7	73.1	73.1	73.5	0.003236		
290.02801	3.79515308	14.4286465	0.0827565372	14.29875	225.6	0.675	73.1	73.4	73.5	0.003236		
295.02801	3.79515308	14.431456	0.0827565372	14.301	225.85	0.675	73.3	73.4	73.3	0.003236		
300.02801	3.79515308	14.4291591	0.0827565372	14.30025	225.85	0.675	73.3	73.4	73.1	0.003236		
305.02801	3.80364808	14.4386485	0.082326512	14.2995	225.825	0.7	73.4	73.3	73.2	0.003236		
310.08	3.82353037	14.4291591	0.082515796	14.30025	225.4	0.675	73.3	73.3	73.2	0.003236		
315.02801	3.82353037	14.4291591	0.082769472	14.29875	224.85	0.675	73.3	73.3	73.4	0.003236		
320.02801	3.81985204	14.4291591	0.082769472	14.29875	224.85	0.7	73.3	73.4	73.4	0.003236		
325.02801	3.81985204	14.4291591	0.082840384	14.2995	225.025	0.7	73.3	73.4	73.5	0.003236		
330.02801	3.83427183	14.4278596	0.082515796	14.301	214.525	0.675	73.8	73.1	73.8	0.00323		

Spec/Pace Sensor Testing

TEST #	DATE	TIME	TEST NAME	MAIN DUCT	MAIN DUCT	GAS INJECT	54S INJECT	WHITTAKER	RETROIC	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL	WHIT CELL
				DIFF IN H2O-MS (PSIA)	DIFF IN H2O-MS (PSIA)	DIFF IN H2O-MS (PSIA)	DIFF IN H2O-MS (PSIA)	OUTPUT (PPM)	TEMP (PPM)	TEMP (F)	GAS TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
600	03/02/02	3:58:17	767	14.43277488	14.430326	14.430326	14.430326	225.623	0.7	73.3	73.3	72.3	73.2	0.000236
605	06	3:58:17	727	14.4308465	14.4308465	14.4308465	14.4308465	227.115	0.675	73.4	73.4	72.3	73.3	0.000235
610	02/002	3:58:17	733	14.4304458	14.4304458	14.4304458	14.4304458	228.5	0.675	73.5	73.5	72.3	73.3	0.000236
615	02/002	3:58:17	734	14.4304458	14.4304458	14.4304458	14.4304458	228.5	0.675	73.7	73.7	72.4	73.5	0.000236
620	06/002	3:58:17	735	14.4308465	14.4308465	14.4308465	14.4308465	228.175	0.675	73.6	73.6	72.3	73.2	0.000237
625	02/002	3:58:17	736	14.4308465	14.4308465	14.4308465	14.4308465	227.7	0.7	73.9	73.9	72.3	73.3	0.000234
630	02/002	3:58:17	737	14.4308465	14.4308465	14.4308465	14.4308465	227.7	0.675	74	74	72.4	73.5	0.000236
635	06	3:58:17	738	14.4308465	14.4308465	14.4308465	14.4308465	225.615	0.675	73.6	73.6	72.3	73.3	0.000235
640	02/002	3:58:17	739	14.4308465	14.4308465	14.4308465	14.4308465	227.85	0.675	73.6	73.6	72.4	73.4	0.000236
645	02/002	3:58:17	740	14.4308465	14.4308465	14.4308465	14.4308465	227.75	0.675	73.2	73.2	72.3	73.3	0.000236
650	02/002	3:58:17	741	14.4308465	14.4308465	14.4308465	14.4308465	227.35	0.675	73.2	73.2	72.3	73.3	0.000236
655	02/002	3:58:17	742	14.4308465	14.4308465	14.4308465	14.4308465	227.85	0.675	73.3	73.3	72.3	73.3	0.000236
660	02/002	3:58:17	743	14.4308465	14.4308465	14.4308465	14.4308465	227.85	0.675	73.3	73.3	72.3	73.3	0.000236
665	06	3:58:17	744	14.4308465	14.4308465	14.4308465	14.4308465	228.5	0.7	73.9	73.9	72.3	73.3	0.000235
670	02/002	3:58:17	745	14.4308465	14.4308465	14.4308465	14.4308465	225.625	0.675	72.5	72.5	72.3	73.3	0.000235
675	02/002	3:58:17	746	14.4308465	14.4308465	14.4308465	14.4308465	228.175	0.675	72.5	72.5	72.4	73.4	0.000236
680	02/002	3:58:17	747	14.4308465	14.4308465	14.4308465	14.4308465	228.175	0.675	73.1	73.1	72.4	73.4	0.000236
685	02/002	3:58:17	748	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
690	02/002	3:58:17	749	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
695	02/002	3:58:17	750	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
700	02/002	3:58:17	751	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
705	02/002	3:58:17	752	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
710	02/002	3:58:17	753	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
715	02/002	3:58:17	754	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
720	06	3:58:17	755	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
725	02/002	3:58:17	756	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
730	02/002	3:58:17	757	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
735	02/002	3:58:17	758	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
740	02/002	3:58:17	759	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
745	02/002	3:58:17	760	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
750	02/002	3:58:17	761	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
755	02/002	3:58:17	762	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
760	02/002	3:58:17	763	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
765	02/002	3:58:17	764	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
770	02/002	3:58:17	765	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
775	02/002	3:58:17	766	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
780	02/002	3:58:17	767	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
785	02/002	3:58:17	768	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
790	06	3:58:17	769	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236
795	02/002	3:58:17	770	14.4308465	14.4308465	14.4308465	14.4308465	228.575	0.675	73.1	73.1	72.4	73.4	0.000236

ShearPlate Bore: Testing

TEST: K522F1_3_12 May 1997 WEC-SPUGL									
SECONDS	MAIN DUCT DIFF IN HOI: ABS (PSIA)	MAIN DUCT DIFF IN HOI: ABS (PSIA)	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PPM)	DETRONIC TEMP (F)	FLAMMABLE GAS TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
800.02002	1.8084808	14.4301458	0.061432048	228.1	6.675	72.5	72.4	73.3	0.000237
800.02006	3.76371301	14.4271473	0.06028508	228.6	6.675	72.5	72.3	73.5	0.000366
810.02002	3.79984378	14.4271473	0.06070152	229.125	6.65	72.7	72.4	73.2	0.000237
810.02002	3.81240394	14.4269854	0.060640394	227.975	6.65	72.7	72.4	73.5	0.000236
820.02002	3.81177443	14.4301458	0.063378182	14.2885	6.65	72.7	72.4	73.3	0.000366
825.02002	0.79251741	14.4269854	0.060638875	14.29725	6.675	72.7	72.4	73.2	0.000337
830.02002	3.79984378	14.4269854	0.060431344	14.298	6.65	72.8	72.4	73.4	0.000236
835.07001	3.81312497	14.4269854	0.061001872	14.2985	6.675	72.8	72.4	73.2	0.000337
840.02002	0.79251741	14.4271473	0.061133116	14.2985	6.65	72.4	72.4	73.3	0.000237
845.02002	3.79984378	14.4271473	0.060836508	14.29725	6.675	72.5	72.4	73.4	0.000237
850.07002	3.80228938	14.4259361	0.060451344	14.30025	6.675	72.5	72.4	73.5	0.000337
855.02002	3.79984378	14.4269854	0.060515285	14.2985	6.65	72.5	72.4	73.5	0.000236
860.02002	3.81312497	14.4269854	0.060476433	14.29725	6.65	72.5	72.4	73.5	0.000236
865.07001	3.80984409	14.4253361	0.070851514	14.30025	6.65	72.5	72.3	73.5	0.000336
870.02002	3.82265498	14.4269854	0.061088855	14.29725	6.65	72.7	72.4	73.3	0.000236
875.02002	3.814800775	14.4269854	0.062362208	14.29725	6.65	72.5	72.4	73.2	0.000236
880.07001	3.81114916	14.4269854	0.061133333	14.2985	6.65	72.5	72.4	73.5	0.000336
885.02002	3.80602285	14.4269854	0.06033681	14.2985	6.65	72.5	72.4	73.5	0.000236
890.02002	3.79984378	14.4269854	0.062071464	14.29725	6.65	72.5	72.4	73.1	0.000335
895.07001	3.80394338	14.4269854	0.062071464	14.2985	6.675	72.5	72.4	73.2	0.000336
900.02002	3.79984378	14.4301458	0.06036881	14.29725	6.65	72.5	72.4	73.3	0.000236
90% OF 15 min value									
Detronic									
14.2 min value >80% 7									
Detronic									
PASS									
PASS									

Sampling for Testing

SECONDS	MAIN DUCT DIFF IN ABS PSIA	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF IN H2O PSIA	WARTAXER OUTPUT (PPM)	DETRONIC PPM	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL (VOLTS)
0.036732	3.8117743	14.4211603	4.29273	34.23	0.65	73.5	72.5	72.8	73.8	0.000328
0.018686	3.82115348	14.4311593	4.2926	35.128	0.676	73.4	72.5	72.5	73.1	0.000336
10.018686	3.82244002	14.4211603	4.105844028	37.65	0.65	73.5	72.6	73.5	73.0	0.0003216
15.011898	3.83080233	14.42118095	4.1054308	37.475	101.125	73.6	73.2	72.5	73.3	0.0003216
20.018686	3.82828138	14.42118095	4.1058531488	124.475	101.176	73.4	72.5	72.5	73.3	0.0003216
25.018686	3.79964376	14.42139992	4.1058168028	137.128	101.176	73.4	72.5	72.5	73.4	0.0003217
30.011898	3.83002233	14.42118095	4.10603134	177.2	101.176	73.5	72.5	72.8	73.6	0.000332
35.018686	3.83052253	14.42119075	4.1059156224	200.98	101.15	73.2	72.5	72.5	73.6	0.000334
40.018686	3.83080682	14.4211603	4.1057819684	231.65	101.5	73.1	73.2	72.5	73.4	0.0003235
45.017393	3.82873087	14.42118095	4.105819872	221.725	101.175	73.4	73.2	72.8	73.3	0.000337
50.018686	3.83052065	14.42119075	4.10603184	238.85	101.176	73.4	72.4	72.5	73.3	0.000337
55.018686	3.79960682	14.4211603	4.1058594032	233.975	101.15	73.4	72.5	72.4	73.4	0.000339
60.011898	3.79964376	14.42119075	4.105844208	238.05	101.175	73.5	73.2	72.4	73.6	0.000338
65.018686	3.83080682	14.42119075	4.105856578	242.58	101.15	73.5	72.8	72.5	73.5	0.000338
70.018686	3.79960682	14.4211603	4.105844384	246.7	101.18	73.4	73.3	72.5	73.5	0.000338
75.018686	3.81160024	14.42119075	4.1058186928	248.85	101.15	73.3	73.2	72.5	73.5	0.000338
80.018686	3.82460031	14.42128095	4.1058282016	251	101.176	73.2	73.3	72.5	73.4	0.00034
85.018686	3.82177873	14.4204007	4.10603184	281	101.176	73.1	73.5	72.5	73.4	0.000339
90.018686	3.81123097	14.42180686	4.105811488	281.74	101.15	73.1	72.6	72.8	73.6	0.000339
95.018686	3.81123097	14.42180686	4.103717103	283.78	101.176	73	73.2	72.6	73.6	0.000339
100.01399	3.81130024	14.42118095	4.1034684	283.78	101.176	73	73.2	72.6	73.6	0.000339
105.018686	3.83240034	14.42119075	4.1058281312	14.29425	101.125	72.9	73.3	72.8	73.4	0.00024
110.018686	3.83240034	14.42119075	4.1058281312	14.29425	101.176	73.6	73.2	72.6	73.2	0.00024
115.018686	3.83240034	14.42119075	4.1058281312	14.29425	101.176	73.3	73.3	72.5	73.3	0.00024
120.018686	3.83240034	14.42119075	4.1058281312	14.29425	101.176	73.3	73.3	72.5	73.3	0.00024
125.018686	3.83240034	14.42119075	4.1058281312	14.29425	101.176	73.3	73.3	72.5	73.3	0.00024
130.018686	3.83240034	14.42119075	4.1058281312	14.29425	101.176	73.3	73.3	72.5	73.3	0.00024
135.018686	3.83240034	14.42119075	4.1058281312	14.29425	101.176	73.3	73.3	72.5	73.3	0.00024
140.018686	3.8311578	14.4211503	4.105476416	14.2955	101.175	73.5	72.6	73.3	73.0	0.00024
145.018686	3.80527235	14.4211503	4.105334955	14.28975	101.15	73.8	72.6	73.4	73.0	0.00024
150.01909	3.81114815	14.4211503	4.105331866	14.39425	101.125	74.1	72.5	73.6	73.6	0.00024
155.018686	3.82923165	14.4213999	4.104660844	14.23425	101.175	74.3	72.6	73.5	73.0	0.00024
160.011898	3.82673031	14.42118095	4.104660844	14.23425	101.176	74	73.2	73.3	73.0	0.00024
165.018686	3.83052038	14.42119075	4.105715415	14.23575	101.15	73.8	73.2	73.3	73.3	0.00024
170.018686	3.85178771	14.4204007	4.106717472	14.23975	101.176	73.5	72.6	73.6	73.0	0.00024
175.018686	3.83240034	14.4211503	4.105949032	14.28425	101.175	73.7	72.5	73.4	73.4	0.00024
180.018686	3.83052031	14.4211503	4.105949032	14.28425	101.178	73.4	72.5	73.5	73.5	0.00024
185.018686	3.83052031	14.4211503	4.105949032	14.28425	101.178	73.4	72.5	73.5	73.5	0.00024
190.018686	3.83052031	14.4211503	4.105949032	14.28425	101.15	73.5	72.8	73.6	73.6	0.00024
195.018686	3.83052031	14.4211503	4.105949032	14.28425	101.15	73.5	72.8	73.6	73.6	0.00024
200.018686	3.83052031	14.4211503	4.105949032	14.28425	101.15	73.5	72.8	73.6	73.6	0.00024
205.018686	3.83052031	14.4211503	4.105949032	14.28425	101.15	73.5	72.8	73.6	73.6	0.00024
210.018686	3.83052031	14.4211503	4.105949032	14.28425	101.15	73.5	72.8	73.6	73.6	0.00024

00000000000000000000000000000000

TEST: K52271, 3 22 May 1997 WED-SPACEL													
SECONDS		MAIN DUCT	MAIN DUCT	GAS INJECT	WHITTAKER	ORTHOIC	FLAMMABLE	MAIN DUCT	WHIT CELL	WHIT CELL			
DIFF	IN	ASS	DIFF	IN	ASS	PPPM	TEMP (F)	TEMP (F)	TEMP (F)	(VOLTS)			
200	0.902	3.6072674	14.4234007	14.295	285.95	101.175	73.3	72.3	72.3	0.00334			
205	0.91	3.6052621	14.4218895	14.29575	286	101.2	73.4	72.6	72.6	0.00334			
210	0.9189	3.62427893	14.4204007	14.2952	286	101.15	73.3	72.6	72.6	0.00342			
215	0.9498	3.63739754	14.4204007	14.29436	286.75	101.175	73.3	72.6	72.6	0.00334			
220	0.9198	3.6051525	14.4218895	14.29575	286.75	101.175	73.3	72.6	72.6	0.00342			
224	0.93	3.61176907	14.4204007	14.295	286.75	101.125	73.3	72.5	72.5	0.00341			
230	0.9	3.6066808	14.415511	14.29532	286.5	101.175	73.3	72.4	72.4	0.00342			
235	0.9198	3.62052621	14.4218895	14.29435	287	101.2	73.2	72.4	72.4	0.00342			
240	0.93	3.63927305	14.4188111	14.29345	286.25	101.175	73.4	72.6	72.6	0.00342			
245	0.93	3.63562173	14.4218895	14.295	286.75	101.2	73.8	73.3	72.5	0.00342			
250	0.91	3.6196766	14.4218895	14.295456	286.25	101.175	73.4	72.5	73.4	0.00342			
255	0.9198	3.61045024	14.4218895	14.295	286.75	101.175	73.4	72.5	72.5	0.00342			
260	0.93	3.61927767	14.4204007	14.295	286.25	101.175	73.2	72.3	72.6	0.00342			
265	0.9198	3.6175307	14.4218895	14.29435	286.5	101.175	73.2	72.5	72.5	0.00342			
270	0.9198	3.62427893	14.4218895	14.29573	286.5	101.3	73.3	72.4	72.5	0.00342			
275	0.93	3.61902713	14.4218895	14.29535	286.75	101.175	73.3	72.5	72.5	0.00341			
280	0.9198	3.6256656	14.4218895	14.295	286.75	101.2	73.5	72.6	72.5	0.00342			
285	0.9198	3.6353667	14.4218895	14.295	270	101.175	72.8	72.5	72.5	0.00342			
290	0.9198	3.60672237	14.4204007	14.295456	273	101.175	73.5	72.6	72.6	0.00342			
295	0.9198	3.61953024	14.4218895	14.295	273.5	101.15	73.2	72.6	72.6	0.00342			
300	0.9198	3.6177011	14.4235468	14.295	271.75	101.175	73.5	72.8	73.2	0.00342			
305	0.9198	3.62913835	14.4218895	14.295	273	101.175	73.7	73.5	72.5	0.00342			
310	0.9198	3.61827767	14.4218895	14.29435	272.5	101.3	73.8	73.5	73.5	0.00342			
315	0.9198	3.6177011	14.4218895	14.295	273	101.175	73.3	72.5	72.5	0.00342			
320	0.9198	3.6184415	14.4218895	14.29435	271.75	101.15	73.9	72.5	72.5	0.00342			
325	0.9	3.62627305	14.4235468	14.29435	273	101.175	73.5	72.5	72.5	0.00342			
330	0.9198	3.61463078	14.4204007	14.29535	273.75	101.175	73.9	72.6	72.6	0.00342			
335	0.93	3.61927767	14.4218895	14.295	271.75	101.175	74.1	73.3	72.5	0.00342			
340	0.9198	3.6295343	14.4218895	14.295	271.75	101.2	74	73.3	72.5	0.00342			
345	0.9198	3.62427893	14.4218895	14.29532	272	101.2	74	73.3	72.6	0.00342			
350	0.9198	3.63057511	14.4218895	14.295	266.75	101.15	74						

Spacecraft Sensor Testing

TEST: NR0271.5 22 May 1967 VEC: SPOON									
SECONDS	MAIN DUCT DIFF (IN H2O)	MAIN DUCT DIFF (IN H2O)	GAS INJECT DIFF (IN H2O)	WHITTAKER OUTPUT (PSIA)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
505.01989	3.81420276	14.4211503	0.106498938	14.2356	73.2	73.3	72.6	73.5	0.000243
505.06	3.81598898	14.4211503	0.106498938	14.2356	73.2	73.3	72.7	73.5	0.000300
610.01989	3.82050726	14.4211503	0.106601154	14.2356	73.3	73.3	72.7	73.4	0.000243
615.01989	3.82050726	14.4211503	0.106601154	14.2356	73.3	73.3	72.7	73.4	0.000243
620.06	3.80946818	14.4211503	0.103061344	14.2356	73.4	73.4	72.7	73.5	0.000242
625.01989	3.80946818	14.4211503	0.103061344	14.2356	73.4	73.4	72.8	73.5	0.000340
630.01989	3.80946818	14.4211503	0.103061344	14.2356	73.4	73.4	72.7	73.4	0.000243
635.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.6	73.5	0.000243
640.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
645.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
650.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
655.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
660.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
665.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
670.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
675.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
680.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
685.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
690.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
695.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
700.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
705.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
710.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
715.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
720.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
725.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
730.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
735.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
740.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
745.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
750.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
755.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
760.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
765.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
770.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
775.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
780.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
785.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
790.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243
795.01989	3.81420276	14.4211503	0.106498938	14.2356	73.3	73.3	72.7	73.5	0.000243

Social Skills Test

TEST 63271, 3 22 May 1997 WEC-5502L												
SECONDS	MAIN FUEL	MAIN DUCT GAS INJECT	GAS INJECT	WHITTAKER	DETRONIC	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL	WHIT CELL		
	DIFF ON FCO	485 (PSIA)	TUFF IN HOD	485 (PSIA)	OUTLET (PPHM)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
80.91989	3.81327497	14.42238688	0.10345824	14.38742	272.75	151.175	73.1	73.3	72.5	73.8	0.000243	
80.91989	3.84381593	14.4215985	0.104333182	14.255	273.75	151.225	73	73.4	72.6	73.5	0.000243	
81.01989	3.80320263	14.43138636	0.108444208	14.2635	274	151.2	73	73.4	72.8	73.3	0.000343	
81.01989	3.80894506	14.42238688	0.103433152	14.28118	271.75	151.175	73.5	73.5	72.4	73.8	0.000243	
82.01989	3.81827757	14.42115935	0.103635188	14.2893	273.75	151.15	72.5	73.2	72.4	73.8	0.000243	
82.01989	3.80235538	14.43034077	0.10415852	14.28475	275.25	151.175	72.8	73.4	72.5	73.4	0.000242	
83.01989	3.80233526	14.42715533	0.103655168	14.38425	275	151.175	72.8	73.5	72.4	73.8	0.000243	
83.01989	3.81324697	14.4215985	0.10415852	14.255	275.25	151.175	72.5	73.3	72.5	73.8	0.000243	
84.01989	3.81327757	14.42115935	0.103635188	14.2893	273.75	151.175	72.8	73.4	72.8	73.3	0.000243	
84.01989	3.82427463	14.42715533	0.103655168	14.2893	274	151.2	72.5	73.3	72.5	73.7	0.000243	
85.01989	3.80827325	14.4215985	0.103655168	14.2893	275	151.2	72.5	73.4	72.6	73.5	0.000243	
85.01989	3.83513526	14.43115935	0.106354384	14.255	276	151.2	72.8	73.4	72.8	73.6	0.000343	
86.01989	3.81827757	14.42115935	0.103635188	14.2893	273	151.175	73.5	73.4	72.6	73.5	0.000243	
86.01989	3.80488046	14.42715533	0.103655168	14.2893	275.25	151.175	72.8	73.3	72.8	73.3	0.000242	
87.01989	3.81827757	14.42115935	0.103635188	14.2893	274.75	151.175	73.8	73.3	72.5	73.3	0.000242	
87.01989	3.80320263	14.42238688	0.103433152	14.2893	275.5	151.175	72.5	73.5	72.5	73.8	0.000242	
88.01989	3.84877655	14.43275852	0.104333182	14.255	275	151.2	72.8	73.3	72.8	73.5	0.000343	
88.01989	3.8269272	14.42315852	0.104215804	14.2893	273.1	151.2	72.8	73.3	72.5	73.5	0.000343	
89.01989	3.80827325	14.42315852	0.103655168	14.2893	274.75	151.2	72.8	73.3	72.8	73.5	0.000343	
89.01989	3.822115348	14.43115935	0.104235052	14.255	275.25	151.2	72.8	73.3	72.8	73.5	0.000344	
90.01989	3.80827325	14.4215985	0.103655168	14.2893	275.25	151.175	72.8	73.3	72.5	73.5	0.000343	

90% of 15 min value

Defences

24.8.4

Is 2 min value >90% ?

Whit

91.01989

24.8.4

Defences

24.8.4

91.01989

24.8.4

Dr. David C. Reardon, DVM, MS, DACVP, DACVIM, DACVIM (Neurology)

TEST: K3-972, 15 May 1997 WED SPOOL									
SECONDS	DIFF (IN FOO)	MAIN DUCT GAS INJECT	GAS INJECT	WARTAKER	DEFLECTOR (PPM)	AMBIENT FLAMMABLE	MAIN DUCT WMT CELL	WMT CELL	
		DIFF (IN FOO)	ABS (PSIA)	DIFF (IN FOO)	ABS (PSIA)	TEMP (F)	TEMP (F)	TEMP (F)	VOLES
200.01868	3.8249357	14.3341842	14.24535	21.16	2100.35	74.5	73.5	73.2	73.2
200.01869	3.8536875	14.3349438	14.24535	21.1335	2100.35	74.5	73.5	72.2	73.3
210.01869	3.82565672	14.3341842	14.24535	21.2175	2100.26	74.4	73.5	72.3	73.3
210.01869	3.81677656	14.3341842	14.24535	21.2425	2100.35	74.5	73.5	73.3	73.3
215.01869	3.806147	14.3341842	14.24535	21.2335	2100.35	74.5	73.5	72.3	73.3
225.01869	3.82953825	14.3344445	14.24535	21.2775	2100.35	74.4	73.5	72.3	73.3
230.01869	3.89739734	14.3344445	14.24535	21.3895	2100.35	74.4	73.5	72.3	73.3
240.01869	3.82557081	14.3341842	14.24535	21.3075	2100.35	74.4	73.5	72.3	73.3
245.01869	3.82553037	14.3341842	14.24535	21.3225	2100.26	74.4	73.5	72.4	73.3
250.01869	3.81773935	14.3341842	14.24535	21.3255	2100.35	74.5	73.5	72.4	73.3
255.01869	3.82665672	14.3341842	14.24535	21.3775	2100.35	74.4	73.5	72.5	73.3
260.01869	3.80347983	14.3344445	14.24535	21.3975	2100.35	74.5	73.5	72.5	73.3
265.01869	3.82713348	14.3344445	14.24535	21.4175	2100.35	74.5	73.5	72.5	73.3
270.01869	3.85741165	14.3344445	14.24535	21.4375	2100.35	74.4	73.5	72.5	73.3
275.01869	3.84741482	14.3344445	14.24535	21.4325	2100.35	74.4	73.5	72.4	73.3
280.01869	3.85229778	14.3341842	14.24535	21.4425	2100.35	74.4	73.5	72.4	73.3
285.01869	3.83083671	14.3344445	14.24535	21.4475	2100.35	74.3	73.5	72.4	73.3
290.01869	3.81832715	14.3341842	14.24535	21.4435	2100.35	74.2	73.5	72.4	73.3
295.01869	3.82115348	14.3341842	14.24535	21.4675	2100.35	74.1	73.5	72.5	73.3
300.01869	3.83630831	14.3341842	14.24535	21.4695	2100.26	74.1	73.5	72.5	73.3
305.01869	3.83157878	14.3341842	14.24535	21.4875	2100.35	74.3	73.5	72.5	73.3
310.01869	3.85115798	14.33280948	14.24535	21.5025	2100.26	74.4	73.5	72.5	73.3
315.01869	3.84833901	14.3344445	14.24535	21.5175	2100.26	74.5	73.5	72.5	73.3
320.01869	3.81239897	14.3341842	14.24535	21.5935	2100.35	74.6	73.5	72.5	73.3
325.01869	3.83436034	14.3344445	14.24535	21.5475	2100.35	74.7	73.5	72.5	73.3
330.01869	3.84849642	14.3341842	14.24535	21.5475	2100.35	74.7	73.5	72.4	73.3
335.01869	3.84116212	14.3344445	14.24535	21.5675	2100.35	74.4	73.5	72.4	73.3
340.01869	3.82177875	14.3341842	14.24535	21.5875	2100.35	74.4	73.5	72.4	73.3
345.01869	3.85368752	14.3344445	14.24535	21.5875	2100.35	74.4	73.5	72.4	73.3
350.01869	3.83430942	14.3344445	14.24535	21.5875	2100.26	74.3	73.5	72.5	73.3
355.01869	3.85564117	14.3344445	14.24535	21.6075	2100.35	74.5	73.5	72.5	73.3
360.01869	3.85115348	14.3344445	14.24535	21.6075	2100.35	74.5	73.5	72.5	73.3
365.01869	3.82741165	14.3344445	14.24535	21.6175	2100.26	74.6	73.5	72.5	73.3
370.01869	3.81832715	14.3341842	14.24535	21.6175	2100.26	74.6	73.5	72.5	73.3
375.01869	3.84833901	14.3344445	14.24535	21.6375	2100.35	74.6	73.5	72.5	73.3
380.01869	3.81832715	14.3341842	14.24535	21.6375	2100.35	74.6	73.5	72.5	73.3
385.01869	3.81832715	14.3341842	14.24535	21.6375	2100.35	74.6	73.5	72.5	73.3
390.01869	3.81832715	14.3341842	14.24535	21.6375	2100.35	74.6	73.5	72.5	73.3
395.01869	3.81832715	14.3341842	14.24535	21.6375	2100.35	74.6	73.5	72.5	73.3
400.01869	3.81832715	14.3341842	14.24535	21.6375	2100.35	74.6	73.5	72.5	73.3

Smoothie Sensor Testing

TEST: NH172, 19 May 1997 REC: SPOOL	SECONDARY MAIN DUCT	MAIN DUCT	GAS INJECT	GAS INJECT	WATER	DETRONIC	AMBIENT	FLANKING	MAIN DUCT	WATER	WATER
	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)	TEMP (IN DUCT)
403.011999	3.41327767	14.33493338	1.03043216	14.34885	2.163	2.150.25	72.3	73.9	72.5	73.8	0.000517
405.09	3.81988104	14.3336646	1.02980872	14.34828	2.175	2.103.25	74.4	73.8	72.5	73.3	0.000518
410.011999	3.99216495	14.3336646	1.02980872	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
415.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
420.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
425.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
430.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
435.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
440.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
445.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
450.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
455.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
460.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
465.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
470.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
475.09	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
480.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
485.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
490.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
495.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
500.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
505.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
510.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
515.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
520.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
525.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
530.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
535.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
540.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
545.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
550.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
555.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
560.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
565.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
570.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
575.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
580.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
585.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
590.011999	3.81988104	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518
595.011999	3.84531886	14.3336646	1.03043216	14.34828	2.175	2.103.25	74.4	73.9	72.5	73.3	0.000518

SECURES	MAIN DUCT DIFF IN HZ (ABS)	MAIN DUCT DIFF IN HZ (PSIA)	GAS INJECT ABS (PSIA)	WHITENER OUTPUT (PPM)	DETRONIC DIFF (PPM)	AMBIENT FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
600.514691	1.8634317	14.333443	14.34470	2.193	2.100.5	74.9	72.8	73.1	0.00519
605.06	3.83480942	14.3319453	14.2455	2.188	2.100.5	74.7	72.9	73.8	0.0052
610.04969	1.83480942	14.3349438	14.2475	2.184.75	2.100.5	74.5	72.6	73.8	0.00519
611.01698	3.81177443	14.3319453	14.24635	2.194	2.100.25	74.3	72.8	73.5	0.0052
620.31159	3.854229278	14.3341342	14.2804138	2.184.8	2.100.5	74.2	72.8	73.3	0.00521
630.01698	3.8311774	14.3334438	14.3447	2.195	2.100.5	74.3	72.8	73.4	0.00516
630.51169	3.82696672	14.3349438	14.3535	2.182.5	2.100.25	74.1	72.6	73.5	0.0052
635.31698	3.8405966	14.3341342	14.34475	2.181.5	2.100.5	74.1	72.8	73.4	0.00521
640.12	3.8493308	14.3354438	14.3444	2.182	2.100.25	74.2	72.8	73.4	0.0052
645.01698	3.82740045	14.3326546	14.3435	2.182.5	2.100.5	74.3	72.8	73.3	0.0053
645.01698	3.8178035	14.3349438	14.2455	2.182	2.100.5	74.1	72.6	73.4	0.00522
650.03	3.86303857	14.3319453	14.2475	2.187.5	2.100.5	74.3	72.8	73.8	0.00531
660.514691	1.8634317	14.3349438	14.24675	2.181.5	2.100.5	74.9	72.8	73.4	0.0053
665.04969	3.84203193	14.3319453	14.34475	2.181.75	2.100.5	74.2	72.7	73.4	0.0052
670.03698	3.83013908	14.3319453	14.2455	2.183.25	2.100.5	74.2	72.7	73.4	0.0052
675.01698	3.82873081	14.3349438	14.2475	2.183.25	2.100.5	74.3	72.7	73.3	0.0052
680.01698	3.83929631	14.3319453	14.24675	2.183.25	2.100.5	74.4	72.7	73.3	0.0052
685.01698	3.82980672	14.3349438	14.24675	2.183.25	2.100.5	74.3	72.7	73.3	0.0052
690.01698	3.85116544	14.3311953	14.24675	2.198.25	2.100.5	74.1	72.7	73.3	0.0052
695.01698	3.83480942	14.3326546	14.24675	2.196	2.100.25	74.6	72.8	73.5	0.0048
700.04969	3.83480942	14.3326546	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
705.01698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
710.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
715.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
720.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
725.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
730.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
735.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
740.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
745.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
750.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053
755.03698	3.83053253	14.3334438	14.24675	2.194	2.100.25	74.5	72.7	73.4	0.0053

TEST AS-1872, 1, 19 May 1997 NED-SPCCL									
SECONDS	MAIN LOGIC	MAIN DUCT	GAS INJECT	WPT-TAKER	DETRONIC	FLAMMABLE	TEMP (F)	TEMP (F)	TEMP (F)
DIFF (H:MM:SS)	ASS (PS04)	DIFF (H:MM:SS)	ASS (PS04)	OUTPUT (PS04)	(PS04)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
800.01858	3.831157E	14.3318433	1.0280672	2203.3	2100.35	73.8	72.7	73.3	0.00523
805.01858	3.8309681	14.3319433	1.03043216	14.24475	2100.5	73.6	74.2	73.4	0.00521
810.01858	3.8308082	14.3320446	1.03280316	14.244	2101.5	73.8	74.2	73.4	0.00501
815.03	3.81677859	14.330448	1.0303216	14.244	2101.75	73.8	72.8	73.1	0.00503
820.03865	3.806147	14.3309438	1.03043216	14.24475	2102.25	73.8	74.2	73.5	0.00522
825.01858	3.8177443	14.3298964	1.0280672	14.244	2101.25	73.8	72.8	73.6	0.00501
830.03865	3.8309681	14.3319433	1.03043216	14.24475	2101.5	74	74.2	73.3	0.00523
840.01858	3.86743345	14.3324445	1.0280672	14.2455	2101.25	74.4	72.8	73.6	0.00523
845.03865	3.8433847	14.3319433	1.0303216	14.2475	2205	74.6	72.8	73.3	0.00501
850.04868	3.82368468	14.3324445	1.03043216	14.244	2101.5	74.6	74.2	73.4	0.00522
855.01858	3.84119212	14.3298964	1.0280672	14.24475	2205	74.7	72.8	73.8	0.00503
860.03	3.81395324	14.330448	1.0303216	14.244	2205	74.8	72.8	73.3	0.00503
865.01858	3.82032838	14.3309438	1.03043216	14.244	2203.75	74.6	74.2	73.2	0.00522
870.01858	3.83248394	14.3298964	1.0280672	14.2455	2100.5	74.3	72.8	73.3	0.00502
875.03	3.83093351	14.330448	1.03043216	14.244	2206	74.3	72.8	73.5	0.00523
880.01858	3.83033638	14.3309438	1.0280672	14.24475	2205.75	74.4	72.8	73.6	0.00501
885.01858	3.81532505	14.330448	1.0303216	14.2455	2100.25	74.4	72.8	73.8	0.00522
890.01858	3.82368468	14.3319433	1.03043216	14.2455	2205.75	74.3	72.8	73.6	0.00522
895.04365	3.84428847	14.3281972	1.0280672	14.2455	2206	74.3	72.8	73.3	0.00503
900.05868	3.81802711	14.3298964	1.02810128	14.24625	2207.75	74.4	72.8	73.6	0.00522
30% OF 15 min value									
1997				19.2 min value >30% 7					
Defuncts				None					
1995-1997				PASS					

TEST: K3187_2 18 May 1987 08:25-SP-031										
SECONDS	MAIN DUCT DIFF. ON FLOW (PSIA)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF. ON FLOW (PSIA)	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PPM)	ELECTRONICS AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL (VOLTS)
0.000000	3.4123687	14.3281972	1.027185724	14.2086	41	0.125	74.1	73	73.5	0.000268
5.000000	3.4400885	14.3247595	1.02737456	14.1355	41.4	167.825	74.7	74.1	73	0.00021
15.000000	3.82175348	14.3359483	1.02818126	14.34475	185.175	1808.75	74.5	74.1	73.1	0.000242
15.000000	3.82175348	14.3359483	1.02818126	14.34475	185.175	2002.25	74.8	74.1	73.1	0.000242
20.000000	3.86154438	14.3359483	1.02803572	14.24175	309	2160.5	74.7	74.1	73	0.000358
25.000000	3.94515438	14.3359483	1.02803572	14.24175	1217.5	2100.5	74.7	74.1	73	0.000381
30.000000	3.91186524	14.3359483	1.0279304	14.24175	1432	2100.5	74.7	74.1	73	0.000415
36.000000	3.79875903	14.3374475	1.0279304	14.241	1832	2100.5	74.7	74.1	73	0.000438
40.000000	3.82876031	14.3357972	1.0279304	14.2425	1575	2100.5	74.5	74.1	73	0.000438
45.000000	3.8311576	14.3374475	1.02855564	14.2425	1758.25	2100.5	74.5	74.1	73.1	0.000483
50.000000	3.82867248	14.3359483	1.02803572	14.24175	1943.75	2100.5	74.4	74.1	73	0.000471
55.000000	3.80735744	14.3359483	1.02803572	14.24175	1802.5	2100.5	74.2	74.1	73.8	0.000476
60.000000	3.8123007	14.3281972	1.02855564	14.24175	1801.5	2100.5	74.3	74.1	73	0.000481
65.000000	3.8185524	14.3274475	1.02855564	14.24055	1832.75	2100.5	74.4	74.1	73	0.000486
75.000000	3.79875903	14.3359483	1.02818126	14.24175	1650.75	2100.5	74.4	74.1	73	0.000488
80.000000	3.8430042	14.3274475	1.0279304	14.244	1875.25	2100.5	74.8	74.1	73	0.000468
85.000000	3.8185524	14.3274475	1.02803572	14.24175	1905.75	2100.5	74.6	74.1	73	0.000468
90.000000	3.8185524	14.3274475	1.02803572	14.24175	1905.75	2100.5	74.6	74.1	73	0.000468
95.000000	3.8185524	14.3274475	1.02803572	14.24175	2008.75	2100.5	74.8	74.1	72.9	0.000467
98.000000	3.82184502	14.3359483	1.03043216	14.24055	2029.5	2100.5	74.7	74.1	72.8	0.000466
100.000000	3.80888862	14.3274475	1.02803572	14.24325	2043.5	2100.5	74.8	74.1	73	0.0005
105.000000	3.80888862	14.3274475	1.02803572	14.24175	2097	2100.5	74.9	74.1	73	0.000508
110.000000	3.81152380	14.3274475	1.02803572	14.2425	2089.5	2100.5	75.1	74.1	73	0.000508
115.000000	3.8035147	14.3274475	1.02803572	14.2425	2057.75	2100.5	75.1	74.1	73	0.000508
120.000000	3.79783522	14.3274475	1.03043216	14.2425	2074.75	2100.5	75.2	74.1	73.6	0.000503
125.000000	3.81152380	14.3359483	1.02803572	14.2425	2080.75	2100.5	75.1	74.1	72.9	0.000504
130.000000	3.81152380	14.3359483	1.02803572	14.2425	2080.75	2100.5	75.1	74.1	72.9	0.000505
135.000000	3.81302467	14.3274475	1.02803572	14.2425	2062.75	2100.5	75.1	74.1	73.6	0.000505
140.000000	3.81302467	14.3274475	1.02803572	14.24175	2062.75	2100.5	75.1	74.1	73.8	0.000506
150.000000	3.81302467	14.3274475	1.02803572	14.24175	2062.75	2100.5	75.1	74.1	73	0.000508
155.000000	3.81302467	14.3274475	1.02803572	14.24175	2062.75	2100.5	75.2	74.1	73.1	0.000503
160.000000	3.81302467	14.3274475	1.02803572	14.24175	2105.75	2100.5	75.3	74.1	73.1	0.000508
165.000000	3.81302467	14.3274475	1.02803572	14.2425	2114.75	2100.5	75.3	74.1	73.1	0.000508
170.000000	3.81302467	14.3274475	1.02803572	14.2425	2114.75	2100.5	75.3	74.1	73	0.000508
175.000000	3.81302467	14.3274475	1.02803572	14.2425	2120.5	2100.5	75.4	74.1	73	0.00051
180.000000	3.81302467	14.3274475	1.02803572	14.2425	2120.5	2100.5	75.4	74.1	73.1	0.000511
185.000000	3.81302467	14.3274475	1.02803572	14.2425	2120.5	2100.5	75.4	74.1	73.1	0.000513
190.000000	3.81302467	14.3274475	1.02803572	14.2425	2120.5	2100.5	75.4	74.1	73	0.000511
195.000000	3.81302467	14.3274475	1.02803572	14.2425	2120.5	2100.5	75.4	74.1	73.5	0.000511
200.000000	3.81302467	14.3274475	1.02803572	14.2425	2120.5	2100.5	75.4	74.1	73.5	0.000511

TEST K51977_2_18 MAY 1997 MEC-SPDCL										MAIN DUCT WHRT CELL (VOLTS)			
SECONDS	MAIN DUCT DIFF IN H2O: ABS PSIA	MAIN DUCT DIFF IN H2O: ABS PSIA	GAS INJECT DIFF IN H2O: ABS PSIA	GAS INJECT ABS PSIA	WHRTAXER CUTPUT (PPHM)	DEFICIENCE (AMBIENT TEMP (F))	FLAMMABLE TEMP (F))	MAIN DUCT TEMP (F)	WHRT CELL TEMP (F)	VOLTS			
230.02002	3.81178307	14.3266672	1.0286672	14.3266672	2138	2100.5	75.5	74.2	73.1	73.6	0.00512	73.6	0.00512
235.02002	3.82546402	14.3266672	1.0286672	14.3266672	2136.75	2100.25	75.5	74.2	73.1	73.6	0.00510	73.6	0.00510
240.02002	3.84855301	14.3266672	1.0286672	14.3266672	2135	2100.5	75.5	74.2	73.1	73.6	0.00513	73.6	0.00513
245.02002	3.87166334	14.3266672	1.0286672	14.3266672	2139.25	2100.5	75.5	74.2	73.1	73.6	0.00512	73.6	0.00512
250.02002	3.89477367	14.3266672	1.0286672	14.3266672	2138.5	2100.5	75.5	74.2	73.1	73.6	0.00514	73.6	0.00514
255.02002	3.91788400	14.3266672	1.0286672	14.3266672	2137.75	2100.5	75.5	74.2	73.1	73.6	0.00515	73.6	0.00515
260.02002	3.94099433	14.3266672	1.0286672	14.3266672	2137	2100.5	75.5	74.2	73.1	73.6	0.00516	73.6	0.00516
265.02002	3.96410466	14.3266672	1.0286672	14.3266672	2136.25	2100.5	75.5	74.2	73.1	73.6	0.00517	73.6	0.00517
270.02002	3.98721499	14.3266672	1.0286672	14.3266672	2135.5	2100.5	75.5	74.2	73.1	73.6	0.00518	73.6	0.00518
275.02002	4.01032532	14.3266672	1.0286672	14.3266672	2134.75	2100.5	75.5	74.2	73.1	73.6	0.00519	73.6	0.00519
280.02002	4.03343565	14.3266672	1.0286672	14.3266672	2134	2100.5	75.5	74.2	73.1	73.6	0.00520	73.6	0.00520
285.02002	4.05654598	14.3266672	1.0286672	14.3266672	2133.25	2100.5	75.5	74.2	73.1	73.6	0.00521	73.6	0.00521
290.02002	4.07965631	14.3266672	1.0286672	14.3266672	2132.5	2100.5	75.5	74.2	73.1	73.6	0.00522	73.6	0.00522
295.02002	4.10276664	14.3266672	1.0286672	14.3266672	2131.75	2100.5	75.5	74.2	73.1	73.6	0.00523	73.6	0.00523
300.02002	4.12587697	14.3266672	1.0286672	14.3266672	2131	2100.5	75.5	74.2	73.1	73.6	0.00524	73.6	0.00524
305.02002	4.14898730	14.3266672	1.0286672	14.3266672	2130.25	2100.5	75.5	74.2	73.1	73.6	0.00525	73.6	0.00525
310.02002	4.17209763	14.3266672	1.0286672	14.3266672	2129.5	2100.5	75.5	74.2	73.1	73.6	0.00526	73.6	0.00526
315.02002	4.19520796	14.3266672	1.0286672	14.3266672	2128.75	2100.5	75.5	74.2	73.1	73.6	0.00527	73.6	0.00527
320.02002	4.21831829	14.3266672	1.0286672	14.3266672	2128	2100.5	75.5	74.2	73.1	73.6	0.00528	73.6	0.00528
325.02002	4.24142862	14.3266672	1.0286672	14.3266672	2127.25	2100.5	75.5	74.2	73.1	73.6	0.00529	73.6	0.00529
330.02002	4.26453895	14.3266672	1.0286672	14.3266672	2126.5	2100.5	75.5	74.2	73.1	73.6	0.00530	73.6	0.00530
335.02002	4.28764928	14.3266672	1.0286672	14.3266672	2125.75	2100.5	75.5	74.2	73.1	73.6	0.00531	73.6	0.00531
340.02002	4.31075961	14.3266672	1.0286672	14.3266672	2125	2100.5	75.5	74.2	73.1	73.6	0.00532	73.6	0.00532
345.02002	4.33386994	14.3266672	1.0286672	14.3266672	2124.25	2100.5	75.5	74.2	73.1	73.6	0.00533	73.6	0.00533
350.02002	4.35698027	14.3266672	1.0286672	14.3266672	2123.5	2100.5	75.5	74.2	73.1	73.6	0.00534	73.6	0.00534
355.02002	4.38009060	14.3266672	1.0286672	14.3266672	2122.75	2100.5	75.5	74.2	73.1	73.6	0.00535	73.6	0.00535
360.02002	4.40320093	14.3266672	1.0286672	14.3266672	2122	2100.5	75.5	74.2	73.1	73.6	0.00536	73.6	0.00536
365.02002	4.42631126	14.3266672	1.0286672	14.3266672	2121.25	2100.5	75.5	74.2	73.1	73.6	0.00537	73.6	0.00537
370.02002	4.44942159	14.3266672	1.0286672	14.3266672	2120.5	2100.5	75.5	74.2	73.1	73.6	0.00538	73.6	0.00538
375.02002	4.47253192	14.3266672	1.0286672	14.3266672	2119.75	2100.5	75.5	74.2	73.1	73.6	0.00539	73.6	0.00539
380.02002	4.49564225	14.3266672	1.0286672	14.3266672	2119	2100.5	75.5	74.2	73.1	73.6	0.00540	73.6	0.00540
385.02002	4.51875258	14.3266672	1.0286672	14.3266672	2118.25	2100.5	75.5	74.2	73.1	73.6	0.00541	73.6	0.00541
390.02002	4.54186291	14.3266672	1.0286672	14.3266672	2117.5	2100.5	75.5	74.2	73.1	73.6	0.00542	73.6	0.00542
395.02002	4.56497324	14.3266672	1.0286672	14.3266672	2116.75	2100.5	75.5	74.2	73.1	73.6	0.00543	73.6	0.00543
400.02002	4.58808357	14.3266672	1.0286672	14.3266672	2116	2100.5	75.5	74.2	73.1	73.6	0.00544	73.6	0.00544
405.02002	4.61119390	14.3266672	1.0286672	14.3266672	2115.25	2100.5	75.5	74.2	73.1	73.6	0.00545	73.6	0.00545
410.02002	4.63430423	14.3266672	1.0286672	14.3266672	2114.5	2100.5	75.5	74.2	73.1	73.6	0.00546	73.6	0.00546
415.02002	4.65741456	14.3266672	1.0286672	14.3266672	2113.75	2100.5	75.5	74.2	73.1	73.6	0.00547	73.6	0.00547
420.02002	4.68052489	14.3266672	1.0286672	14.3266672	2113	2100.5	75.5	74.2	73.1	73.6	0.00548	73.6	0.00548
425.02002	4.70363522	14.3266672	1.0286672	14.3266672	2112.25	2100.5	75.5	74.2	73.1	73.6	0.00549	73.6	0.00549
430.02002	4.72674555	14.3266672	1.0286672	14.3266672	2111.5	2100.5	75.5	74.2	73.1	73.6	0.00550	73.6	0.00550
435.02002	4.74985588	14.3266672	1.0286672	14.3266672	2110.75	2100.5	75.5	74.2	73.1	73.6	0.00551	73.6	0.00551
440.02002	4.77296621	14.3266672	1.0286672	14.3266672	2110	2100.5	75.5	74.2	73.1	73.6	0.00552	73.6	0.00552
445.02002	4.79607654	14.3266672	1.0286672	14.3266672	2109.25	2100.5	75.5	74.2	73.1	73.6	0.00553	73.6	0.00553
450.02002	4.81918687	14.3266672	1.0286672	14.3266672	2108.5	2100.5	75.5	74.2	73.1	73.6	0.00554	73.6	0.00554
455.02002	4.84229720	14.3266672	1.0286672	14.3266672	2107.75	2100.5	75.5	74.2	73.1	73.6	0.00555	73.6	0.00555
460.02002	4.86540753	14.3266672	1.0286672	14.3266672	2107	2100.5	75.5	74.2	73.1	73.6	0.00556	73.6	0.00556
465.02002	4.88851786	14.3266672	1.0286672	14.3266672	2106.25	2100.5	75.5	74.2	73.1	73.6	0.00557	73.6	0.00557
470.02002	4.91162819	14.3266672	1.0286672	14.3266672	2105.5	2100.5	75.5	74.2	73.1	73.6	0.00558	73.6	0.00558
475.02002	4.93473852	14.3266672	1.0286672	14.3266672	2104.75	2100.5	75.5	74.2	73.1	73.6	0.00559	73.6	0.00559
480.02002	4.95784885	14.3266672	1.0286672	14.3266672	2104	2100.5	75.5	74.2	73.1	73.6	0.00560	73.6	0.00560
485.02002	4.98095918	14.3266672	1.0286672	14.3266672	2103.25	2100.5	75.5	74.2	73.1	73.6	0.00561	73.6	0.00561
490.02002	5.00406951	14.3266672	1.0286672	14.3266672	2102.5	2100.5	75.5	74.2	73.1	73.6	0.00562	73.6	0.00562
495.02002	5.02717984	14.3266672	1.0286672	14.3266672	2101.75	2100.5	75.5	74.2	73.1	73.6	0.00563	73.6	0.00563
500.02002	5.05029017	14.3266672	1.0286672	14.3266672	2101	2100.5	75.5	74.2	73.1	73.6	0.00564	73.6	0.00564
505.02002	5.07340050	14.3266672	1.0286672	14.3266672	2100.25	2100.5	75.5	74.2	73.1	73.6	0.00565	73.6	0.00565
510.02002	5.09651083	14.3266672	1.0286672	14.3266672	2099.5	2100.5	75.5	74.2	73.1	73.6	0.00566	73.6	0.00566
515.02002	5.11962116	14.3266672	1.0286672	14.3266672	2098.75	2100.5	75.5	74.2	73.1	73.6	0.00567	73.6	0.00567
520.02002	5.14273149	14.3266672	1.0286672	14.3266672	2098	2100.5	75.5	74.2	73.1	73.6	0.00568	73.6	0.00568
525.02002	5.16584182	14.3266672	1.0286672	14.3266672	2097.25	2100.5	75.5	74.2	73.1	73.6	0.00569	73.6	0.00569
530.02002	5.18895215	14.3266672	1.0286672	14.3266672	2096.5	2100.5	75.5	74.2	73.1	73.6	0.00570	73.6	0.00570
535.02002	5.21206248	14.3266672	1.0286672	14.3266672	2095.75	2100.5	75.5	74.2	73.1	73.6	0.00571	73.6	0.00571
540.02002	5.23517281	14.3266672	1.0286672	14.3266672	2095	2100.5	75.5	74.2	73.1	73.6	0.00572	73.6	0.00572
545.02002	5.25828314	14.3266672	1.0286672	14.3266672	2094.25	2100.5	75.5	74.2	73.1	73.6	0.00573	73.6	0.00573
550.02002	5.28139347	14.3266672	1.0286672	14.3266672	2093.5	2100.5	75.5	74.2	73.1	73.6	0.00574	73.6	0.00574
555.02002	5.30450380	14.3266672	1.0286672	14.3266672	2092.75	2100.5	75.5	74.2	73.1	73.6	0.00575	73.6	0.00575
560.02002	5.32761413	14.3266672	1.0286672	14.3266672	2092	2100.5	75.5	74.2	73.1	73.6	0.00576	73.6	0.00576
565.02002	5.35072446	14.3266672											

2009.10.26

TEST K3-672 2 19 May 1967 WHEC SPEC.											
SECONDS	MAIN DUCT DIFF IN PSI	MAIN DUCT ABS PRESS	GAS INJECT DIFF IN PSI	GAS INJECT ABS PRESS	WHITTAKER OUTPUT (PPM)	DETRONICS AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHEC CELL TEMP (F)	WHEC CELL VOLTS	
606 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74	74.8	73.8	0.000516	
805 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74	74.8	73.7	0.000502	
810 1100Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74	74.8	72.8	0.000522	
815 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
820 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
825 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
830 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
835 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
840 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
845 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
850 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
855 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
860 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
865 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
870 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
875 0400Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
880 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
885 0700Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.8	0.000522	
890 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.7	0.000522	
895 0200Z	14.3299408	14.3299408	14.3299408	14.3299408	2165.75	2100.5	74.1	74.8	73.7	0.000522	
 									

Spot/Trace Sensor Testing

TEST KS1872_2 15 May 1987 WEC-SF00L									
SECONDS	MAIN DUCT DIFF (IN P20) ABS (PSIA)	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PPM)	DETROCK'S AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT WHIT CELL TEMP (F)	WHIT CELL VOLTS		
808.02002	3.3679387	14.3236894	14.33725	2100.5	73.7	74.6	73.8	0.006326	
808.05102	3.36743346	14.3334491	2226.75	2100.5	73.8	74.6	73.6	0.006325	
810.05002	3.36524213	14.3321387	14.2378	2100.5	73.8	74.6	73.8	0.006323	
815.02002	3.35034117	14.3231973	14.23675	2225	2100.5	73.8	74.7	0.006325	
820.05102	3.35341838	14.3230843	14.2365	2225.25	2100.5	73.8	73.8	0.006325	
825.02002	3.36369152	14.32318994	14.23725	2226	2100.5	73.8	74.7	0.006324	
830.02002	3.3311578	14.3236394	14.238	2224.25	2100.5	73.8	74.7	0.006326	
835.05102	3.368304873	14.3231872	14.23725	2224.25	2100.5	74	74.7	0.006325	
840.05002	3.364892295	14.3236876	14.2375	2228	2100.5	73.9	74.7	0.006324	
845.02002	3.37932559	14.3231172	14.238	2228.25	2100.5	74	74.6	0.006325	
850.05002	3.36334867	14.3236876	14.2365	2226.75	2100.5	74	74.7	0.006324	
855.03001	3.379674032	14.3236876	14.238	2228.25	2100.5	74.3	74.7	0.006326	
860.02002	3.37163305	14.3232352	14.238	2228.25	2100.5	74.3	74.7	0.006325	
865.05002	3.36482238	14.3231987	14.23725	2228.25	2100.5	74.3	74.7	0.006325	
870.02002	3.36878387	14.3234481	14.2385	2228.25	2100.5	74.5	74.7	0.006326	
875.02002	3.35435779	14.3244461	14.23675	2228	2100.5	74.6	74.7	0.006326	
880.02002	3.36154117	14.3244461	14.23725	2226.75	2100.5	74.7	74.7	0.006326	
885.02002	3.37895105	14.3244461	14.2365	2228	2100.5	74.8	74.7	0.006326	
890.05002	3.36417519	14.3239488	14.238	2227.75	2200.75	74.3	74.7	0.006326	
895.02002	3.342341285	14.3235536	14.23725	2227	2100.5	74.1	74.7	0.006326	
900.02002	3.37350085	14.3236894	14.238	2226.25	2181	73.9	74.7	0.006327	
808.05102 min value 14.2 min value 250% 3									
3360 3360 3360 3360 3360 3360 3360 3360 3360 3360									
2034 375 1981 578 3533 3533 3533 3533 3533 3533									

Specific Sensor Testing

TEST K0007_3 20 May 1987 WEL-SPOON									
SECURE	MAIN DUCT	MAIN DUCT	GAS INJECT	WATER	DETROIT	AMBIENT	FLAMMABLE	MAIN DUCT	WART CELL
	DIFF (IN H2O)	ABS (PSIA)	DIFF (IN H2O)	ABS (PSIA)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)
0.00000	3.7730359	14.308715	0.00000	14.308715	83.75	87.25	71.4	71.9	72.4
5.000196	3.78112752	14.382718	1.02417776	14.39575	175.65	171.5	71.5	71.9	72.4
10.00030	3.77715715	14.3784218	1.0380332	14.39575	175.65	171.5	71.5	71.9	72.4
15.00040	3.79031828	14.3798311	1.06903438	14.39475	940	932.5	71.8	71.9	72.4
20.00050	3.7914092	14.38217	1.07104068	14.395	940.5	932.5	71.8	71.9	72.4
25.00060	3.77989590	14.3814203	1.06504648	14.39735	1943.75	2103.75	72	71.9	72.4
30.00070	3.78238108	14.3862727	1.0273304	14.39575	1824	2103.5	72.1	71.9	72.4
35.00080	3.79485752	14.3798211	1.03855408	14.395	1977	2103.5	72	71.9	72.4
40.00090	3.78487515	14.3797175	1.0273304	14.395	1738	2103.5	71.9	71.9	72.4
45.00100	3.87115348	14.39317	1.02675682	14.395	1870.5	2103.5	71.9	71.9	72.4
50.00110	3.77853677	14.3784218	1.0273304	14.39425	1944.25	2103.5	71.8	71.9	72.4
55.00120	3.79291635	14.3794315	1.0373304	14.398	1891	2103.5	71.9	71.9	72.4
60.00130	3.78889586	14.3797175	1.0373304	14.39575	2103.75	2103.5	71.8	71.9	72.4
65.00140	3.80944928	14.3781715	1.03955584	14.39575	2083.5	2103.5	71.8	71.9	72.4
70.00150	3.7748835	14.3784218	1.0273304	14.398	2082.75	2103.5	72.1	71.9	72.4
75.00160	3.78855607	14.3784315	1.0273304	14.395	2118.5	2103.5	72	71.9	72.4
80.00170	3.77113186	14.3781722	1.0373304	14.395	2130.5	2103.5	71.9	71.9	72.4
85.00180	3.78575963	14.3805707	1.0373304	14.398	2142.75	2103.5	71.9	71.9	72.4
90.00190	3.80714464	14.3797175	1.0273304	14.39425	2163.5	2103.5	71.7	71.9	72.4
95.00200	3.79735522	14.3805707	1.03955584	14.39575	2163.75	2103.5	71.9	71.9	72.4
100.00210	3.79178579	14.3814203	1.0373304	14.3985	2183.75	2103.5	71.8	71.9	72.4
105.00220	3.79575748	14.3781715	1.03955584	14.395	2194.25	2103.5	71.8	71.9	72.4
110.00230	3.79833644	14.3814203	1.03955584	14.398	2211.25	2103.5	71.5	71.9	72.4
115.00240	3.79825176	14.3798211	1.03955584	14.398	2214.75	2103.5	71.4	71.9	72.4
120.00250	3.79465214	14.38217	1.03855408	14.398	2226.75	2103.5	71.5	71.9	72.4
125.00260	3.79813836	14.3805707	1.0373304	14.398	2226.5	2103.5	71.5	71.9	72.4
130.00270	3.79813836	14.3805707	1.03855408	14.395	2234.75	2103.5	71.8	71.9	72.4
135.00280	3.79422525	14.3794218	1.03955584	14.39725	2245.5	2103.5	71.6	71.9	72.4
140.00290	3.79889586	14.3805707	1.03955584	14.3985	2250	2103.5	71.9	71.9	72.4
145.00300	3.77113186	14.3814203	1.03855408	14.39575	2254.75	2103.5	71.5	71.9	72.4
150.00310	3.77113186	14.3798211	1.0273304	14.39575	2256.5	2103.5	71.5	71.9	72.4
155.00320	3.79735522	14.3805707	1.03955584	14.398	2261.75	2103.5	71.8	71.9	72.4
160.00330	3.79735522	14.3805707	1.03955584	14.398	2266.75	2103.5	71.8	71.9	72.4
165.00340	3.80562173	14.38217	1.0273304	14.395	2271	2103.5	71.9	71.9	72.4
170.00350	3.79114652	14.3794218	1.0373304	14.398	2275	2103.5	71.5	71.9	72.4
175.00360	3.79238108	14.3784218	1.0373304	14.395	2280.75	2103.5	71.5	71.9	72.4
180.00370	3.79238108	14.3784218	1.0373304	14.395	2281.75	2103.5	71.9	71.9	72.4
185.00380	3.79238108	14.3784218	1.0373304	14.395	2287.5	2103.5	71.5	71.9	72.4
190.00390	3.79238108	14.3784218	1.0373304	14.395	2292	2103.5	71.5	71.9	72.4
195.00400	3.798551306	14.3784218	1.0373304	14.395	2294.75	2103.5	71.5	71.9	72.4

Source: *Journal of the American Statistical Association*, 1997, 92, 103-114.

SECONDS	MAIN DUCT DIFF IN H2O (PSIA)	MAIN DUCT TEMP (°F)	GAS INJECT PRESS (PSIA)	GAS INJECT TEMP (°F)	WHITTAKER OUTLET (PPM)	DETRONICS-A TEMP (°F)	FLAMMABLE TEMP (°F)	MAIN DUCT TEMP (°F)	WHIT CELL VOLTS
230.02002	3.77383240	14.331119	1.02782004	14.29575	2396.5	2100.5	71.5	71.5	2.000538
235.02002	3.81144384	14.3968707	1.02816564	14.29675	2396.5	2100.5	71.5	71.5	2.000538
240.02002	3.76487978	14.3784213	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
245.02002	3.78732396	14.3814203	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
250.02002	3.75081535	14.3814203	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
255.02002	3.76382864	14.3798211	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
260.02002	3.77803985	14.3805719	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
265.02002	3.77938566	14.3794216	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
270.02002	3.77711168	14.3798211	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
275.02002	3.77353787	14.3814203	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
280.02002	3.83938562	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
285.02002	3.83938562	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
290.02002	3.79436837	14.3814203	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
295.02002	3.79436837	14.3814203	1.02855684	14.29675	2396.5	2100.5	71.5	71.5	2.000538
300.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
305.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
310.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
315.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
320.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
325.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
330.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
335.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
340.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
345.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
350.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
355.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
360.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
365.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
370.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
375.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
380.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
385.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
390.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
395.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538
400.02002	3.79117011	14.3805719	1.02776504	14.29675	2396.5	2100.5	71.5	71.5	2.000538

Spot/Place Sensor Testing

TEST: K24202_2_30 MAY 1997 WEG-SP-01									
SECONDS	MAIN DUCT OFF (IN REC), ABS (PSIA)	MAIN DUCT GAS INJECT DIFF (IN REC), ABS (PSIA)	WHITAKER OUTPUT (PPM)	DETRONCE AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	INHT CELL TEMP (F)	INHT CELL VOLT CELL (VOLTS)	
800.02002	3.75256205	14.3814323	1.0343392	14.38725	2193.25	2201.75	71.3	72.1	0.00546
805.14001	3.74497765	14.3814323	1.0343392	14.3955	2194.75	2202	71.3	72.1	0.00546
810.02002	3.7498127	14.38217	1.0323046	14.29725	2395	2207.75	71.3	71.1	0.00552
815.04003	3.75296405	14.3814323	1.03293362	14.298	2395.25	2207.75	71.3	71.2	0.00546
820.18002	3.77775715	14.3814323	1.0315876	14.28725	2396.25	2202	71.3	71.3	0.00546
825.02002	3.76988734	14.3806797	1.03293362	14.23875	2394	2207.75	71.3	71.2	0.00558
830.08	3.77238455	14.38217	1.03293362	14.39375	2395.25	2207.75	71.3	71.3	0.00546
835.07002	3.77070951	14.3808707	1.03330848	14.368	2395.25	2207.75	71.3	71.2	0.00546
840.02002	3.7746835	14.3806797	1.03293362	14.293	2394.5	2207.75	71.3	71.2	0.00546
845.04003	3.7814852	14.38217	1.03293362	14.2685	2395	2207.75	71.3	71.1	0.00558
850.14001	3.77238452	14.38217	1.03293362	14.298	2396.25	2207.75	71.3	71.3	0.00546
855.02002	3.77050695	14.3814323	1.03293362	14.29725	2398.25	2207.75	71.3	71.2	0.00546
860.02002	3.78114052	14.3815198	1.03354538	14.398	2397.25	2202	71.3	71.3	0.00546
865.18001	3.74424537	14.3799311	1.03481034	14.2965	2396	2202	71.3	71.2	0.00546
870.02002	3.74034592	14.3839892	1.0323046	14.2965	2398.25	2207.75	71.3	71.2	0.00558
875.02	3.80114494	14.3839892	1.03509448	14.28725	2400	2202	71.3	71.2	0.00552
880.02002	3.80050281	14.3828196	1.03293362	14.298	2400.5	2202	71.3	71.3	0.00546
885.02002	3.78575363	14.3758211	1.0323046	14.298	2398	2207.75	71.3	71.3	0.00546
890.06002	3.76528471	14.3839892	1.03354538	14.29725	2395.25	2207.75	71.3	71.3	0.00546
895.02002	3.77809965	14.3839892	1.03293362	14.26725	2397.25	2207.75	71.3	71.3	0.00558
900.02002	3.77507193	14.3799311	1.0323046	14.298	2396.75	2207.75	71.3	71.3	0.00546
90% OF 15 min value									
Min									
Max									
is 2 min value > 90% >									
Detonics									
Detonics									
2193.25	1481.53	1425.5	1425.5	1425.5	1425.5	1425.5	1425.5	1425.5	1425.5

TEST 140302_4_20 May 1987 N602-N600C											
SEC	MAIN DUCT	MAIN DUCT	GAS HEAT	GAS INJECT	WHITTAKER	DETRONICS	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL	WHIT CELL
NO.	DIFF (IN H2O) ABS (PSIA)	DIFF (IN H2O) ABS (PSIA)	DIFF (IN H2O) ABS (PSIA)	DIFF (IN H2O) ABS (PSIA)	OUTPUT (PPM)	(PPM)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
0.000000	3.8017701	14.3874173	0.0000000	14.3874173	37.5	37.5	72.2	72.2	71.9	72.9	0.000000
5.000000	3.7889847	14.3861668	1.0000000	14.3861668	53.125	0.725	72.2	72.2	71.9	72.9	0.000000
10.000000	3.7889847	14.3874173	1.0000000	14.3874173	247.775	3204.75	72.2	72.2	71.9	72.9	0.000000
15.000000	3.77300769	14.3896066	1.0000000	14.3896066	946	3803	72.2	72.2	71.9	72.9	0.000000
20.000000	3.76805533	14.3874173	1.0000000	14.3874173	1692.25	4002.25	72.2	72.2	71.9	72.9	0.000000
25.000000	3.77603612	14.3889158	1.0000000	14.3889158	2758	4063.75	72.2	72.2	71.9	72.9	0.000000
30.000000	3.77550877	14.3898168	1.0000000	14.3898168	2752.25	2000.75	72.2	72.2	71.9	72.9	0.000000
35.000000	3.76561525	14.3891866	1.0000000	14.3891866	3044.5	3000.75	72.2	72.2	71.9	72.9	0.000000
40.000000	3.76612364	14.3898168	1.0000000	14.3898168	3272.5	3000.75	72.2	72.2	71.9	72.9	0.000000
45.000000	3.7681702	14.3874173	1.0000000	14.3874173	3286.25	3000.75	72.2	72.2	71.9	72.9	0.000000
50.000000	3.7681308	14.3889158	1.0000000	14.3889158	3610.75	3800.75	72.2	72.2	71.9	72.9	0.000000
55.000000	3.76815471	14.3889158	1.0000000	14.3889158	3609	3800.75	72.2	72.2	71.9	72.9	0.000000
60.000000	3.7686943	14.3881888	1.0000000	14.3881888	3963.5	3900.75	72.2	72.2	71.9	72.9	0.000000
65.000000	3.7681597	14.3881888	1.0000000	14.3881888	3709.25	3800.75	72.2	72.2	71.9	72.9	0.000000
70.000000	3.76112766	14.3851854	1.0000000	14.3851854	3788	3900.75	72.2	72.2	71.9	72.9	0.000000
75.000000	3.76466152	14.3881888	1.0000000	14.3881888	3827	4002.25	72.2	72.2	71.9	72.9	0.000000
80.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
85.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
90.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
95.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
100.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
105.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
110.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
115.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
120.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
125.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
130.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
135.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
140.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
145.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
150.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
155.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
160.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
165.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
170.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
175.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
180.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
185.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
190.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
195.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000
200.000000	3.76805533	14.3896066	1.0000000	14.3896066	3841.25	4002.25	72.2	72.2	71.9	72.9	0.000000

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SECONDS	MAIN DUCT DIFF (IN) ABS (PSIA)	MAIN DUCT GAS INJECT DIFF (IN H ₂ O)	WHARTAKER OUTPUT (PPM)	DETRONICS AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHRT CELL TEMP (F)	WHRT CELL VOLTS
1557	453022	2.0	May 1997	08C-3P001				
300	330302	3.1644333	14.3303183	1.86712703	14.3342	4032.75	4032.35	72.1
305	330303	3.1661133	14.3303183	1.86712703	14.3342	4032.75	4032.35	72.1
310	330304	3.1678133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
315	330305	3.1695133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
320	330306	3.1712133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
325	330307	3.1729133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
330	330308	3.1746133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
335	330309	3.1763133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
340	330310	3.1780133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
345	330311	3.1797133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
350	330312	3.1814133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
355	330313	3.1831133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
360	330314	3.1848133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
365	330315	3.1865133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
370	330316	3.1882133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
375	330317	3.1899133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
380	330318	3.1916133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
385	330319	3.1933133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
390	330320	3.1950133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
395	330321	3.1967133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
400	330322	3.1984133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
405	330323	3.1999133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
410	330324	3.2014133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
415	330325	3.2029133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
420	330326	3.2044133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
425	330327	3.2059133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
430	330328	3.2074133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
435	330329	3.2089133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
440	330330	3.2104133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
445	330331	3.2119133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
450	330332	3.2134133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
455	330333	3.2149133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
460	330334	3.2164133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
465	330335	3.2179133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
470	330336	3.2194133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
475	330337	3.2209133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
480	330338	3.2224133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
485	330339	3.2239133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
490	330340	3.2254133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
495	330341	3.2269133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
500	330342	3.2284133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
505	330343	3.2299133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
510	330344	3.2314133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
515	330345	3.2329133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
520	330346	3.2344133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
525	330347	3.2359133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
530	330348	3.2374133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
535	330349	3.2389133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
540	330350	3.2404133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
545	330351	3.2419133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
550	330352	3.2434133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
555	330353	3.2449133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
560	330354	3.2464133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
565	330355	3.2479133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
570	330356	3.2494133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
575	330357	3.2509133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
580	330358	3.2524133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
585	330359	3.2539133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
590	330360	3.2554133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
595	330361	3.2569133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1
600	330362	3.2584133	14.3304158	1.86712703	14.3342	4032.75	4032.35	72.1

TEST K3337_4 25 May 1837 DEC SPOOL									
SECONDS	MAIN DUCT DIFF (IN H2O) ABS (PSIA)	MAIN DUCT DIFF (IN H2O) ABS (PSIA)	GAS INJECT ABS (PSIA)	WHT/TAHER OUTPUT (PPM)	DETRONICS TEMP (F)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHT CELL VOLT CELL VOLTS
100.02002	3.7964263	14.3296632	1.8566384	4241.5	4104.5	72.5	73.4	72.2	73.000817
805.02002	3.81480276	14.391915	1.85951872	4245	4104.5	72.5	73.4	72.2	73.000818
810.02002	3.8017701	14.3841635	1.8566384	4348.5	4104.5	72.4	73.4	72.2	73.000817
815.02002	3.80688852	14.3926647	1.85726384	4348.75	4104.5	72.4	73.4	72.2	73.000818
820.02002	3.7926415	14.3903834	1.8566384	4247.75	4104.5	72.4	73.4	72.2	73.000817
825.02002	3.7868308	14.3841635	1.8566384	4248	4104.25	72.3	73.4	72.2	73.000817
130.02002	3.7717515	14.3524143	1.8566384	4250.25	4104.5	72.3	73.4	72.1	73.000817
435.09003	3.80884009	14.3924143	1.8566384	4248.5	4104.5	72.3	73.4	72.2	73.000818
840.03001	3.78663512	14.351915	1.8566384	4251.75	4104.5	72.2	73.4	72.2	73.000818
945.02002	3.78951093	14.391815	1.85726384	4252	4104.5	72.2	73.4	72.1	73.000817
855.02003	3.806147	14.3926647	1.8566384	4251.5	4104.5	72.2	73.4	72.1	73.000818
865.02003	3.7648732	14.3866632	1.8566384	4253.25	4104.5	72.3	73.4	72.1	73.000818
385.03003	3.76976533	14.3911854	1.85726384	4254	4104.5	72.3	73.4	72.1	73.000818
865.04001	3.80884009	14.3911854	1.8566384	4254	4104.5	72.3	73.4	72.2	73.000818
870.03001	3.78114092	14.3554143	1.8566384	4251.75	4104.5	72.3	73.4	72.2	73.000817
375.02002	3.80296368	14.391915	1.8566384	4248.5	4104.5	72.3	73.4	72.1	73.000817
885.02003	3.75530915	14.3568682	1.8566384	4248.25	4104.5	72.3	73.4	72.2	73.000818
885.04001	3.7717515	14.3564156	1.8566384	4248.25	4104.5	72.3	73.4	72.1	73.000817
895.02002	3.75114092	14.3576647	1.8566384	4251.5	4104.5	72.3	73.4	72.2	73.000818
895.04001	3.80344992	14.3926647	1.8566384	4251.75	4104.5	72.4	73.4	72.2	73.000818
900.15002	3.7717515	14.351915	1.85475208	4251.75	4104.5	72.4	73.4	72.1	73.000817
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TEST K03072 2 21 May 1987 WISC-SPECIAL										
SECONDS	MAIN DUCT DIFF (K H2O) ABS (PSIA)	MAIN DUCT GAS INJECT DIFF (H2O) ABS (PSIA)	WHITTAKER OUTPUT (PPM)	DETROIT'S PPM	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS	
0.0007192	0.1193023	0.1193023	14.32075	65.7	73.2	73	73.4	73.4	0.00271	
5.018888	3.1546194	14.352664	14.36035	66.675	193.25	73	73.4	73.4	0.00213	
10.018888	3.7628225	14.341638	14.36225	278.75	300.75	73	72	73.4	0.00277	
15.018888	3.7587700	14.352413	14.36125	1027.5	402.25	73.2	73.4	73.4	0.00333	
20.018888	3.7485226	14.352443	14.361	1757.5	410.5	72	73.4	73.4	0.00438	
25.018888	3.7452607	14.3504155	14.361	2365	421	73	71.8	73.4	0.00666	
30.018888	3.7420009	14.348111	14.361	2773.5	421	73	71.8	73.4	0.00623	
35.018888	3.7387425	14.3458054	14.361	3009.5	421	72	71.8	73.4	0.00681	
40.018888	3.7354835	14.3435004	14.361	3288	421	73	71.8	73.4	0.00688	
45.018888	3.7322241	14.341195	14.36175	3434	421	72	73	71.8	0.00671	
50.018888	3.7289646	14.338890	14.36175	3565.5	421	71.9	71.8	73.4	0.00734	
55.018888	3.7257056	14.336585	14.361	3641.5	421	73	71.8	73.4	0.00736	
60.018888	3.7224466	14.334280	14.361	3716.5	421	73	71.8	73.4	0.00745	
65.018888	3.7191876	14.331975	14.35875	3772.5	421	73	71.8	73.4	0.00752	
70.018888	3.7159286	14.329670	14.35875	3813.25	421	73	71.9	73.4	0.00757	
75.018888	3.7126696	14.327365	14.35923	3853	421	73.1	71.8	73.4	0.00767	
80.018888	3.7094106	14.325060	14.35923	3893.25	421	73	71.8	73.4	0.00773	
85.018888	3.7061516	14.322755	14.35923	3933.5	421	73	71.9	73.4	0.00777	
90.018888	3.7028926	14.320450	14.36175	3973.5	421	73.1	71.9	73.4	0.00778	
95.018888	3.7000000	14.318145	14.36025	3982.5	421	73	71.9	73.4	0.00783	
100.018888	3.6963746	14.315840	14.36025	4013	421	73	71.9	73.4	0.00785	
105.018888	3.6931156	14.313535	14.361	4025.25	421	73	71.9	73.4	0.00787	
110.018888	3.6898566	14.311230	14.361	4039	421	73	71.9	73.4	0.00787	
115.018888	3.6865976	14.308925	14.361	4060.5	421	73.1	72	73.4	0.00791	
120.018888	3.6833386	14.306620	14.361	4080.5	421	73	72	73.4	0.00796	
125.018888	3.6800796	14.304315	14.3625	4093.5	421	73.1	72	73.4	0.00795	
130.018888	3.6768206	14.302010	14.3625	4083.5	421	73	72	73.4	0.00796	
135.018888	3.6735616	14.299705	14.3625	4056.35	421	73.1	72	73.4	0.00791	
140.018888	3.6703026	14.297400	14.361	4034.5	421	73.1	71.9	73.4	0.00783	
145.018888	3.6670436	14.295095	14.3625	4078.25	421	73	71.9	73.4	0.00787	
150.018888	3.6637846	14.292790	14.3625	4076.25	421	73.1	72	73.4	0.00789	
155.018888	3.6605256	14.290485	14.3625	4050.75	421	73	72	73.4	0.00789	
160.018888	3.6572666	14.288180	14.3625	4210.75	421	73.2	72	73.4	0.00791	
165.018888	3.6540076	14.285875	14.3625	4193.5	421	73.1	72	73.4	0.00795	
170.018888	3.6507486	14.283570	14.36175	4168.75	421	73.2	72	73.4	0.00785	
175.018888	3.6474896	14.281265	14.36175	4178.25	421	73.2	72.1	73.4	0.00788	
180.018888	3.6442306	14.278960	14.36175	4127	421	73.2	72.1	73.4	0.00785	
185.018888	3.6409716	14.276655	14.36175	4127	421	73.2	72.1	73.4	0.00785	
190.018888	3.6377126	14.274350	14.36175	4127	421	73.2	72.1	73.4	0.00785	
195.018888	3.6344536	14.272045	14.36175	4127	421	73.2	72.1	73.4	0.00785	
200.018888	3.6311946	14.269740	14.36175	4127	421	73.2	72.1	73.4	0.00785	
205.018888	3.6279356	14.267435	14.36175	4127	421	73.2	72.1	73.4	0.00785	
210.018888	3.6246766	14.265130	14.36175	4127	421	73.2	72.1	73.4	0.00785	
215.018888	3.6214176	14.262825	14.36175	4127	421	73.2	72.1	73.4	0.00785	
220.018888	3.6181586	14.260520	14.36175	4127	421	73.2	72.1	73.4	0.00785	
225.018888	3.6148996	14.258215	14.36175	4127	421	73.2	72.1	73.4	0.00785	
230.018888	3.6116406	14.255910	14.36175	4127	421	73.2	72.1	73.4	0.00785	
235.018888	3.6083816	14.253605	14.36175	4127	421	73.2	72.1	73.4	0.00785	
240.018888	3.6051226	14.251300	14.36175	4127	421	73.2	72.1	73.4	0.00785	
245.018888	3.6018636	14.248995	14.36175	4127	421	73.2	72.1	73.4	0.00785	
250.018888	3.5986046	14.246690	14.36175	4127	421	73.2	72.1	73.4	0.00785	
255.018888	3.5953456	14.244385	14.36175	4127	421	73.2	72.1	73.4	0.00785	
260.018888	3.5920866	14.242080	14.36175	4127	421	73.2	72.1	73.4	0.00785	
265.018888	3.5888276	14.239775	14.36175	4127	421	73.2	72.1	73.4	0.00785	
270.018888	3.5855686	14.237470	14.36175	4127	421	73.2	72.1	73.4	0.00785	
275.018888	3.5823096	14.235165	14.36175	4127	421	73.2	72.1	73.4	0.00785	
280.018888	3.5790506	14.232860	14.36175	4127	421	73.2	72.1	73.4	0.00785	
285.018888	3.5757916	14.230555	14.36175	4127	421	73.2	72.1	73.4	0.00785	
290.018888	3.5725326	14.228250	14.36175	4127	421	73.2	72.1	73.4	0.00785	
295.018888	3.5692736	14.225945	14.36175	4127	421	73.2	72.1	73.4	0.00785	
300.018888	3.5660146	14.223640	14.36175	4127	421	73.2	72.1	73.4	0.00785	
305.018888	3.5627556	14.221335	14.36175	4127	421	73.2	72.1	73.4	0.00785	
310.018888	3.5594966	14.219030	14.36175	4127	421	73.2	72.1	73.4	0.00785	
315.018888	3.5562376	14.216725	14.36175	4127	421	73.2	72.1	73.4	0.00785	
320.018888	3.5529786	14.214420	14.36175	4127	421	73.2	72.1	73.4	0.00785	
325.018888	3.5497196	14.212115	14.36175	4127	421	73.2	72.1	73.4	0.00785	
330.018888	3.5464606	14.209810	14.36175	4127	421	73.2	72.1	73.4	0.00785	
335.018888	3.5432016	14.207505	14.36175	4127	421	73.2	72.1	73.4	0.00785	
340.018888	3.5399426	14.205200	14.36175	4127	421	73.2	72.1	73.4	0.00785	
345.018888	3.5366836	14.202895	14.36175	4127	421	73.2	72.1	73.4	0.00785	
350.018888	3.5334246	14.200590	14.36175	4127	421	73.2	72.1	73.4	0.00785	
355.018888	3.5301656	14.198285	14.36175	4127	421	73.2	72.1	73.4	0.00785	
360.018888	3.5269066	14.195980	14.36175	4127	421	73.2	72.1	73.4	0.00785	
365.018888	3.5236476	14.193675	14.36175	4127	421	73.2	72.1	73.4	0.00785	
370.018888	3.5203886	14.191370	14.36175	4127	421	73.2	72.1	73.4	0.00785	
375.018888	3.5171296	14.189065	14.36175	4127	421	73.2	72.1	73.4	0.00785	
380.018888	3.5138706	14.186760	14.36175	4127	421	73.2	72.1	73.4	0.00785	
385.018888	3.5106116	14.184455	14.36175	4127	421	73.2	72.1	73.4	0.00785	
390.018888	3.5073526	14.182150	14.36175	4127	421	73.2	72.1	73.4	0.00785	
395.018888	3.5040936	14.179845	14.36175	4127	421	73.2	72.1	73.4	0.00785	
400.018888	3.5008346	14.177540	14.36175	4127	421	73.2	72.1	73.4	0.00785	
405.018888	3.4975756	14.175235	14.36175	4127	421	73.2	72.1	73.4	0.00785	
410.018888	3.4943166	14.172930	14.36175	4127	421	73.2	72.1	73.4	0.00785	
415.018888	3.4910576	14.170625	14.36175	4127	421	73.2	72.1	73.4	0.00785	
420.018888	3.4877986	14.168320	14.36175	4127	421	73.2	72.1	73.4	0.00785	
425.018888	3.4845396	14.166015	14.36175	4127	421	73.2	72.1	73.4	0.00785	
430.018888	3.4812806	14.163710	14.36175	4127	421	73.2	72.1	73.4	0.00785	
435.018888	3.4780216	14.161405	14.36175	4127	421	73.2	72.1	73.4	0.00785	
440.018888	3.4747626	14.159100	14.36175	4127	421	73.2	72.1	73.4	0.00785	
445.018888	3.4715036	14.156795	14.36175	4127	421	73.2	72.1	73.4	0.00785	
450.018888	3.4682446	14.154490	14.36175	4127	421	73.2	72.1	73.4	0.00785	
455.018888	3.4649856	14.152185	14.36175	4127	421	73.2	72.1	73.4	0.00785	
460.018888	3.4617266	14.149880	14.36175	4127	421	73.2	72.1	73.4	0.00785	
465.018888	3.4584676	14.147575	14.36175	4127	421	73.2	72.1	73.4	0.00785	
470.018888	3.4552086	14.145270	14.36175	4127	421</					

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TEST K2072'S 20 May 1997 WEC SCHOOL												
SECONDS	MAIN DUCT DIFF (IN HDO)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF IN HDO (PSIA)	WHITNIER OUTPUT (PPHM)	OETRONICS PPHM	ARGUMENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL PPHM	WHIT CELL TEMP (F)	WHIT CELL PPHM
600.00988	3.7653582	14.333443	14.3688	4333.5	4333.25	73.9	73.9	72.2	73.4	0.00083	73.4	0.00083
606.01096	3.76502726	14.394438	14.3696	4343.0612	4333.25	73.2	73.9	72.3	73.4	0.00083	73.4	0.00083
610.02068	3.76486787	14.391915	14.3875	4335.75	4303.25	73.3	74	73.3	73.4	0.00083	73.4	0.00083
616.03	3.76735332	14.3945736	14.3875	4335.45	4333.25	73.5	73.9	72.3	73.4	0.00083	73.4	0.00083
620.01989	3.7748925	14.392443	14.368	4333.25	4333.25	73.9	73.9	72.3	73.4	0.00083	73.4	0.00083
625.01999	3.80235538	14.393443	14.368	4334	4303.25	73.7	73.9	72.2	73.4	0.00083	73.4	0.00083
630.09	3.78178147	14.394338	14.368	4334.25	4303.25	73.6	74	72.1	73.5	0.00083	73.5	0.00083
635.01999	3.78089396	14.393443	14.368	4334.25	4303.25	73.5	74	72.2	73.4	0.00083	73.4	0.00083
640.01999	3.78265141	14.394338	14.368	4334.25	4303.25	73.7	74	72.3	73.4	0.00083	73.4	0.00083
645.01998	3.78089396	14.393443	14.368	4334.25	4303.25	73.7	73.9	72.3	73.4	0.00083	73.4	0.00083
650.01999	3.80382281	14.394338	14.368	4334.25	4303.25	73.5	74	72.1	73.5	0.00083	73.5	0.00083
655.02068	3.82084858	14.399443	14.368	4334.25	4303.25	73.5	74	72.1	73.4	0.00083	73.4	0.00083
660.01999	3.77698586	14.396932	14.368	4334.25	4303.25	74	74	72.3	73.4	0.00083	73.4	0.00083
665.01999	3.828347	14.393443	14.368	4334.25	4303.25	74	74	72.3	73.4	0.00083	73.4	0.00083
670.03	3.83927347	14.3956632	14.368	4334.25	4303.25	74	74	72.3	73.4	0.00083	73.4	0.00083
675.01999	3.80303385	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
680.01999	3.7939344	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
685.03	3.81677836	14.396443	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
690.01998	3.79148552	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
695.01999	3.76926747	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
700.01999	3.78520236	14.396932	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
705.01999	3.78265141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
710.01999	3.78089396	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
715.01999	3.78089396	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
720.01998	3.80882281	14.396443	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
725.01998	3.80882281	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
730.01998	3.78178678	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
735.01998	3.61437315	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
738.01998	3.76590445	14.392443	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
740.01998	3.76800449	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
745.01998	3.76501417	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
750.01998	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
755.01998	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
760.06	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
765.01998	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
770.01998	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
775.03	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
780.06	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
785.03	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
790.06	3.78050141	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083
795.01998	3.80144664	14.394338	14.368	4334.25	4303.25	74.1	74	72.3	73.4	0.00083	73.4	0.00083

Specimens Series: Testing

TEST: K32172_# 20 May 1987 WEC-SPOOL									
SECONDARY MAIN DUCT		MAIN DUCT		GAS INJECT		NORTH TOWER		DETROIT/NEARBY FLAMMABLE	
DATE (M/D/Y)		ABS (PSIA)		DIFF (IN H ₂ O)		OUTLET (PSIA)		TEMP (F)	
TIME (H:M)		ABS (PSIA)		DIFF (IN H ₂ O)		TEMP (F)		TEMP (F)	
8:05:01:599		14.30875		1.843574658		4355.5		4353.25	
8:05:01:599		14.30875		1.843574658		4357.75		4353.25	
8:10:01:599		14.30875		1.843574658		4367.75		4353.25	
8:15:01:599		14.30875		1.843574658		4367.75		4353.25	
8:20:01:599		14.30875		1.843574658		4367.75		4353.25	
8:25:01:599		14.30875		1.843574658		4367.75		4353.25	
8:30:01:599		14.30875		1.843574658		4367.75		4353.25	
8:35:01:599		14.30875		1.843574658		4367.75		4353.25	
8:40:01:599		14.30875		1.843574658		4367.75		4353.25	
8:45:01:599		14.30875		1.843574658		4367.75		4353.25	
8:50:01:599		14.30875		1.843574658		4367.75		4353.25	
8:55:01:599		14.30875		1.843574658		4367.75		4353.25	
9:00:01:599		14.30875		1.843574658		4367.75		4353.25	
9:05:01:599		14.30875		1.843574658		4367.75		4353.25	
9:10:01:599		14.30875		1.843574658		4367.75		4353.25	
9:15:01:599		14.30875		1.843574658		4367.75		4353.25	
9:20:01:599		14.30875		1.843574658		4367.75		4353.25	
9:25:01:599		14.30875		1.843574658		4367.75		4353.25	
9:30:01:599		14.30875		1.843574658		4367.75		4353.25	
9:35:01:599		14.30875		1.843574658		4367.75		4353.25	
9:40:01:599		14.30875		1.843574658		4367.75		4353.25	
9:45:01:599		14.30875		1.843574658		4367.75		4353.25	
9:50:01:599		14.30875		1.843574658		4367.75		4353.25	
9:55:01:599		14.30875		1.843574658		4367.75		4353.25	
10:00:01:599		14.30875		1.843574658		4367.75		4353.25	
10:05:01:599		14.30875		1.843574658		4367.75		4353.25	
10:10:01:599		14.30875		1.843574658		4367.75		4353.25	
10:15:01:599		14.30875		1.843574658		4367.75		4353.25	
10:20:01:599		14.30875		1.843574658		4367.75		4353.25	
10:25:01:599		14.30875		1.843574658		4367.75		4353.25	
10:30:01:599		14.30875		1.843574658		4367.75		4353.25	
 					

Speed/Pressure Sensor Testing

TEST: K32072, 26 May 1987 WEST-SP-COL									
SECONDS	MAIN FLOW	MAIN DUCT	GAS FLOW	INJECT	WARTAKER	DETRONICS	AMBIENT	FLAMMABLE	MAIN DUCT
	DIFF (IN FLOW)	ABS (PSIA)	DIFF (IN FLOW)	ABS (PSIA)	OUTFLOW (PSIA)	(PSIA)	TEMP (F)	TEMP (F)	TEMP (F)
0.0269732	3.2188324	14.3304143	0.522006886	14.3845	51.925	87.5	72.7	73.5	72.1
5.016888	3.7682358	14.3926847	1.19410728	14.381	83.833	101.225	72.9	73.4	73.4
10.016888	3.8130387	14.3969435	1.43617458	14.361	304.25	320.2	72.7	73.5	73.3
15.016888	3.7861395	14.3941638	1.6473272	14.36028	104.7	400.2	72.7	73.5	73.3
20.016888	3.82740918	14.3934143	1.9473264	14.361	183.75	480.2	72.5	73.5	73.3
25.016888	3.78489782	14.3941638	1.9473272	14.361	242.75	470.4	72.8	73.5	72.2
30.016888	3.79738122	14.3934143	1.94962866	14.36028	298.75	470.4	72.8	73.5	72.1
35.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
40.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
45.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
50.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
55.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
60.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
65.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
70.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
75.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
80.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
85.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
90.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
95.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
100.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
105.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
110.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
115.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
120.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
125.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
130.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
135.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
140.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
145.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
150.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
155.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
160.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
165.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
170.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
175.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
180.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
185.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
190.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
195.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1
200.016888	3.8114918	14.3969392	1.9473264	14.36028	358.75	470.4	72.8	73.5	72.1

ShorePlace Street Testing

TEST: K32572_8 20 May 1837 WEC-SPOOL									
SECONDS	MAIN FLOW	MAIN DUCT	GAS INJECT	GAS INJECT	WHITAKER	DEFINITE AMBIENT	FLAMMABLE	MAIN FLOW	WHIT CELL
	DIFF (IN PROS) ABS (PSIA)	DIFF (IN PROS) ABS (PSIA)			IN/OUT (PPPM)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)
205.018569	3.87622388	14.30491735	1.95443338	14.30225	4275.75	4333.35	72.5	73.8	73.3
206.018569	3.79851945	14.30034143	1.8667038	14.30175	4293.75	4211	72.5	73.6	73.4
210.018569	3.80052173	14.30266147	1.9667038	14.301	4291	4210.75	72.5	73.6	73.4
216.018569	3.79551741	14.30366147	1.9636138	14.304	4288.75	4211	72.5	73.8	73.4
220.018569	3.79393344	14.30366147	1.9545792	14.304	4307.35	4211	72.5	73.4	73.4
225.018569	3.82230403	14.3071624	1.96483248	14.304	4308.35	4210.75	72.5	73.6	73.4
230.018569	3.80602281	14.3077834	1.96483248	14.3025	4308.35	4211	72.5	73.8	73.4
235.018569	3.79551741	14.3085818	1.9636138	14.304	4302.35	4211	73.4	73.8	73.4
240.018569	3.80233838	14.30961128	1.96603336	14.3025	4302.35	4211	73.5	73.8	73.4
245.018569	3.79616755	14.3095652	1.95420704	14.3025	4302.35	4211	73.5	73.8	73.4
250.018569	3.80220838	14.30941125	1.96420704	14.3025	4305.35	4211	73.1	73.6	73.4
255.018569	3.81777443	14.307172	1.96430704	14.304	4308.35	4211	73.1	73.8	73.4
260.018569	3.82750215	14.30641128	1.9636138	14.3025	4315	4210.75	73.1	73.8	73.4
265.018569	3.79498214	14.30966132	1.96430704	14.3025	4322.35	4211	73.1	73.6	73.4
270.01	3.78717537	14.30966132	1.96430704	14.3025	4317.35	4211	73.4	73.8	73.4
275.018569	3.78526817	14.30941128	1.95420704	14.304	4308.35	4211	73.7	73.8	73.4
280.018569	3.81133867	14.30841128	1.96420704	14.304	4330.35	4210.25	73.7	73.6	73.4
285.01	3.81677535	14.30841128	1.96430704	14.3025	4334.35	4210.75	73.6	73.8	73.4
290.018569	3.81302457	14.30634143	1.9636138	14.30475	4335.35	4333.35	73.5	73.9	73.4
295.018569	3.80802281	14.30841128	1.9636138	14.30475	4331.35	4303.25	73.3	74	73.4
300.018569	3.7871392	14.30491128	1.96205815	14.3025	4328.25	4303.25	73.3	74	73.4
305.01	3.78438782	14.30441128	1.95420704	14.3025	4327.25	4303.25	73.3	74	73.4
310.018569	3.80084908	14.3071624	1.96420704	14.3025	4331.35	4303.25	73.3	74	73.4
315.018569	3.78863844	14.30441128	1.95420704	14.3025	4331.35	4303.25	73.3	74	73.4
320.018569	3.77675931	14.30491128	1.96170528	14.304	4338.25	4303.25	73.5	74	73.4
325.018569	3.80084908	14.30841128	1.96420704	14.304	4347.35	4303.25	73.5	74	73.4
330.018569	3.78676933	14.30441128	1.95420704	14.3025	4345.75	4303.25	73.4	74	73.4
335.018569	3.80364933	14.30491128	1.9636138	14.3025	4353	4311	73.1	74.1	73.4
340.018569	3.78863844	14.30441128	1.9536138	14.3025	4355.35	4303.25	73.2	74.1	73.4
345.01	3.78614958	14.30341128	1.95420704	14.30475	4358.25	4303.25	73.5	74.1	73.4
350.018569	3.78498214	14.30341128	1.96170528	14.301	4356.75	4311	73.8	74.1	73.4
355.01	3.80051877	14.30266147	1.96170528	14.301	4356.75	4303.25	73.8	74.1	73.4
360.018569	3.80002281	14.30441128	1.96170528	14.30475	4356.75	4303.25	73.8	74.1	73.4
365.018569	3.81133867	14.30266147	1.96170528	14.304	4359.5	4311	74	74.1	73.4
370.018569	3.8123087	14.30441128	1.96170528	14.304	4359.25	4303.25	74.1	74.1	73.4
375.018569	3.79489114	14.30491128	1.96170528	14.3025	4360.75	4303.25	74.2	74.1	73.4
380.018569	3.79489114	14.30341128	1.96170528	14.3025	4360.75	4303.25	74.2	74.1	73.4
385.018569	3.80114884	14.30341128	1.96170528	14.304	4361.25	4303.25	74	74.2	73.4
390.018569	3.84178128	14.305832	1.96170528	14.3025	4363.5	4303.25	73.9	74.2	73.4
395.018569	3.81677535	14.30441128	1.96170528	14.304	4363.25	4303.25	73.8	74.1	73.4

[illegible]

[illegible]

TEST RESULTS - 20 May 1987 REC-300L										
REGIONS	MAIN DUCT DIFF (IN H2O)	MAIN DUCT GAS INJECT ABS (PSIA)	MAIN DUCT GAS INJECT DIFF (IN H2O)	GAS SUBJECT ABS (PSIA)	WHITTAKER OUTPUF (PSIA)	DETROITRICE TEMP (F)	AMBIENT FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL MOULTY
600-01-080	3.17177403	14.35941839	1.64830051	14.36328	4387.5	4303.25	74.1	74.4	73.2	0.00030
605-01-085	3.18012381	14.36341431	1.64820365	14.36325	4386.25	4303.25	74.2	74.5	73.3	0.000318
610-01-080	3.18355450	14.36711624	1.64803858	14.36325	4392	4303.25	74.1	74.4	73.4	0.000398
615-01-085	3.18497783	14.3694143	1.64802185	14.36325	4394.5	4303	74.3	74.5	73.3	0.000326
620-01-080	3.17865383	14.35711634	1.64802686	14.36475	4384.25	4303.25	74.5	74.5	73.3	0.000318
625-01-085	3.18657127	14.36413631	1.64803858	14.364	4395.5	4303.25	74.5	74.5	73.3	0.000364
630-01-080	3.17865383	14.3594143	1.64802686	14.36325	4391.75	4303.25	74.4	74.5	73.3	0.000320
630-01-085	3.1774421	14.35611339	1.64802686	14.36475	4404.75	4303.25	74.1	74.6	72.2	0.000504
640-01-080	3.17465224	14.35413631	1.64803282	14.36475	4403	4303.25	73.9	74.5	73.3	0.000398
645-01-080	3.18052173	14.3594143	1.64802185	14.361	4402.75	4303.25	73.9	74.5	73.3	0.000364
650-01-080	3.18123697	14.3634143	1.64802686	14.361	4405.75	4303.25	73.6	74.5	73.3	0.000381
655-01-080	3.18194453	14.3634143	1.64803282	14.364	4407.5	4303.25	73.8	74.5	73.3	0.000341
660-01-080	3.18233616	14.36413631	1.64802185	14.36325	4405.5	4303.25	73.9	74.5	73.3	0.000381
665-01-080	3.18173307	14.3634143	1.64803282	14.36325	4403.75	4303.25	73.2	74.5	72.2	0.000504
670-01-080	3.18233616	14.3634143	1.64803282	14.36475	4401.5	4334	73.2	74.5	73.3	0.000364
675-01-080	3.18233616	14.3634143	1.64803282	14.36475	4401.5	4303.25	73	74.5	73.3	0.000364
680-01-080	3.18233616	14.3634143	1.64803282	14.36475	4401.5	4303.25	73.8	74.5	73.3	0.000364
685-01-080	3.18233616	14.3634143	1.64803282	14.36475	4401.5	4303.25	73.8	74.5	73.3	0.000364
690-01-080	3.17111318	14.35413631	1.64803282	14.3655	4402.5	4303.25	73.7	74.5	73.3	0.000364
695-01-085	3.18373307	14.36711624	1.64803858	14.3654	4405.75	4303.25	73.9	74.5	73.3	0.000381
700-01-085	3.18497783	14.3694143	1.64802185	14.3655	4407.5	4303.25	73.7	74.5	73.3	0.000326
705-01-080	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
710-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
715-01-080	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
720-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
725-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
730-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
735-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
740-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
745-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
750-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
755-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
760-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
765-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
770-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
775-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
780-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
785-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
790-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
795-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341
800-01-085	3.18194453	14.3634143	1.64803282	14.364	4405	4303.25	73.8	74.5	73.3	0.000341

TEST: K32072_2 20 May 1997 REC: SP00L												
SECONDS	MAIN DUCT OFF (IN F20)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN F20)	WHITTIAR OUTPUT (PPM)	DETRONICS TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL WGLTS			
900.01689	3.4465132	14.3971824	1.9473272	14.384	4823	4303.25	73.9	72.3	0.003842			
905.00001	3.51177443	14.3984128	1.8473972	14.384	4822.5	4303.25	73.8	72.3	0.003842			
910.01686	3.78428285	14.3964128	1.9467076	14.384	4818	4303.25	74	72.3	0.003842			
915.01689	3.91427581	14.3934143	1.9473272	14.38478	4816.28	4303.25	74.1	72.3	0.003842			
920.01689	3.2188924	14.3971824	1.9467076	14.384	4816.75	4303.25	74.1	72.3	0.003841			
925.01686	3.0088883	14.3971824	1.9467076	14.384	4812.75	4303.25	74.2	72.3	0.003841			
930.01689	3.78428285	14.3964128	1.9473272	14.384	4814	4303.25	74.2	72.3	0.003842			
935.01689	3.90177311	14.3964128	1.9467076	14.3828	4817.5	4303.25	74.2	72.3	0.003842			
940.01686	3.9729323	14.3966817	1.9467076	14.38478	4817.75	4303.25	74.3	72.3	0.003842			
945.01689	3.21777875	14.3971824	1.9473272	14.3828	4815.75	4303	74	72.3	0.003842			
950.01689	3.00364252	14.3964128	1.9473272	14.3828	4815.5	4303.25	73.8	72	0.003842			
955.01686	3.80114484	14.3964128	1.9467076	14.38478	4817	4303.25	73.9	74.6	0.003842			
960.01689	3.79678915	14.3964128	1.9473272	14.3828	4813	4303.25	73.8	72.1	0.003842			
965.01689	3.80177311	14.3966817	1.9467076	14.384	4818.25	4303	73.8	72.3	0.003843			
970.01686	3.00523173	14.3981813	1.9473272	14.3828	4822.25	4303	73.9	72.1	0.003844			
975.01686	3.8007857	14.3971824	1.9467076	14.384	4828	4303.25	74.8	72	0.003843			
980.01689	3.90728754	14.3974143	1.94709284	14.38478	4835.75	4303.25	73.9	72.1	0.003843			
985.01689	3.00051927	14.3996817	1.9467076	14.384	4824.5	4303	73.7	72	0.003842			
990.01686	3.81740181	14.3986813	1.9473272	14.38478	4821.25	4303.25	73.8	72.1	0.003843			
995.01686	3.81177443	14.3984128	1.9473272	14.384	4835	4303.25	73.5	72.1	0.003843			
900.01689	3.78428285	14.3971824	1.9473272	14.384	4821.25	4303.25	73.4	72.1	0.003844			

25% OF 15 min value

Detronics

387.825

15 2 min value -25% ?

Whit

94.933

Spot/Place Sensor Testing

TEST K52175 7 31 May 1997 WED 5:00Z.											
SECONDS	MAIN DUCT DIFF (IN) HOUS. (PSIA)	MAIN DUCT AIRS. (PSIA)	GAS FLOW WFF (IN H2O) (PSIA)	GAS INJECT WFF (IN H2O) (PSIA)	WARTAKER OUTPUT (PSIA)	DETRONICS ARBITR. (PPPM)	AMBIENT TEMP (°F)	FLAMMABLE TEMP (°F)	MAIN DUCT TEMP (°F)	WHT CELL TEMP (°F)	WHT CELL VOLTS
0.010000	3.742667	14.465378	0.027810	14.43225	52.93	0.75	74	71.5	72.7	72	0.00218
1.010000	3.724952	14.465378	2.933648	14.51425	53.35	1.88	74	71.5	72.7	71.9	0.00216
19.010000	3.740378	14.469378	2.940282	14.5036	41.75	511.5	74	71.5	72.8	72	0.00304
15.010000	3.776758	14.466127	2.946783	14.5038	14.78	505.5	74	71.5	72.6	72	0.00472
20.010000	3.734692	14.465378	2.949684	14.5038	38.15	505.5	74	71.5	72.5	72	0.00636
25.010000	3.770378	14.469378	2.951734	14.5038	38.53	505.5	74	71.5	72.5	72	0.0078
30.010000	3.781302	14.463378	2.954286	14.502	42.11	505.5	73.8	71.8	72.6	72	0.00837
35.010000	3.785915	14.465378	2.956736	14.50275	47.15	634.75	73.5	71.5	72.5	72	0.00901
40.010000	3.773538	14.466772	2.960783	14.5036	50.52	505.5	73.5	71.8	72.5	72	0.00945
45.010000	3.763284	14.463378	2.959598	14.50275	53.85	538.75	73.5	71.8	72.5	72	0.00978
50.010000	3.781302	14.463378	2.96354	14.5036	50.52	634.75	73.5	71.5	72.5	72	0.01002
55.010000	3.786847	14.464284	2.967154	14.50378	58.16	640.5	73.7	71.7	72.6	72	0.01022
60.010000	3.791405	14.465378	2.971154	14.502	57.21	640.5	73.8	71.7	72.6	72	0.01036
65.010000	3.794405	14.464284	2.963047	14.5036	58.16	640.5	73.5	71.7	72.7	71.9	0.01044
70.010000	3.745488	14.463378	2.963672	14.5036	50.52	640.5	74	71.7	72.8	72	0.01058
75.010000	3.766308	14.466127	2.963047	14.5036	50.52	640.5	74	71.7	72.7	72	0.01067
80.010000	3.730651	14.466278	2.963047	14.5036	50.52	640.5	74	71.7	72.7	72	0.01075
85.010000	3.776758	14.465378	2.963182	14.502	50.52	633.25	74.1	71.7	72.8	72	0.01079
90.010000	3.776758	14.465378	2.963182	14.502	50.52	633.25	74.1	71.7	72.7	72	0.01086
95.010000	3.742427	14.464284	2.963047	14.5036	51.24	633.25	74.2	71.7	72.7	72.1	0.01094
100.010000	3.730651	14.463378	2.963047	14.5036	51.24	633.25	74.2	71.8	72.6	72.1	0.01096
105.010000	3.764331	14.466127	2.963047	14.50425	51.24	633.25	74.2	71.8	72.5	72.1	0.01098
110.010000	3.754952	14.466278	2.963047	14.50275	52.11	633.25	74	71.8	72.5	72	0.01102
115.010000	3.710862	14.466127	2.963047	14.502	52.29	633.25	74	71.8	72.4	72	0.01105
120.010000	3.740827	14.466127	2.963047	14.5036	52.29	633.25	74	71.8	72.2	72.1	0.01106
125.010000	3.727124	14.463378	2.962182	14.5036	52.29	633.25	74	71.9	72.3	72	0.01111
130.010000	3.721355	14.466772	2.961708	14.5036	52.29	633.25	74	71.9	72.3	72	0.01113
135.010000	3.767420	14.466127	2.962304	14.5036	52.29	633.25	74	71.9	72.3	72	0.01113
140.010000	3.735407	14.466278	2.961854	14.5036	52.29	633.25	73.9	71.9	72.3	72	0.01117
145.010000	3.735407	14.463378	2.961854	14.5036	52.29	633.25	73.9	71.9	72.3	72	0.01119
150.010000	3.769124	14.463378	2.963047	14.50425	52.29	633.25	74	72.2	72.2	72	0.01122
155.010000	3.727983	14.464284	2.963047	14.5036	53.48	633.25	73.8	71.9	72.2	72	0.01124
160.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
165.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
170.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
175.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
180.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
185.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
190.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
195.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124
200.010000	3.766127	14.466127	2.963047	14.5036	53.48	633.25	73.8	72	72.1	72	0.01124

SpeedSense Sensor Testing

TEST 532772, 21 May 1987 WEC SPECOL												
SECONDS	MAIN DUCT DIFF IN H2O ASS (PSIA)	GAS INJECT ASS (PSIA)	WHITTAKER OUTPUT (PPM)	DETRONICS TEMP (°F)	AMBIENT TEMP (°F)	FLAMMABLE TEMP (°F)	MAIN DUCT TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL VOLTS)			
400.02002	3.7650013	14.404284	2.5480312	14.303	8535.75	8535.75	8532	72.8	72.5	70.9	72.1	0.00148
405.02002	3.74682716	14.453783	2.54878032	14.303	8537	8503.25	72.6	72.5	70.9	72.1	0.00148	
410.02002	3.72423663	14.4561078	2.54740576	14.3035	8534.5	8507.75	72.7	72.5	70.9	72.2	0.00147	
415.02002	3.74674803	14.4618284	2.54829298	14.30425	8534.25	8534.75	72.8	72.8	70.9	72.2	0.00146	
420.02002	3.73238614	14.4531391	2.54878032	14.30425	8533.25	8503	72.5	72.5	70.9	72.2	0.00146	
425.02002	3.74487054	14.4531160	2.54878032	14.30425	8533.5	8542.25	72.7	72.5	70.9	72.1	0.00148	
430.02002	3.75112324	14.455378	2.54878032	14.305	8543.25	8507.75	72.6	72.8	70.9	72.1	0.00145	
435.02002	3.75500113	14.455378	2.54878032	14.305	8546.5	8507.5	72.6	72.5	70.9	72.2	0.00145	
440.02002	3.75950013	14.455378	2.54878032	14.3055	8549	8507.75	72.5	72.5	70.9	72.1	0.00145	
445.02002	3.7650013	14.455378	2.54878032	14.3055	8550.25	8507.75	72.5	72.5	70.9	72.2	0.00145	
450.02002	3.74487054	14.455378	2.54878032	14.30425	8533.25	8507.5	72.5	72.5	70.9	72.2	0.00145	
455.02002	3.75237278	14.455378	2.54878032	14.30425	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
460.02002	3.75950013	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
465.02002	3.7650013	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
470.02002	3.73244893	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
475.02002	3.73511876	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
480.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
485.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
490.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
495.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
500.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
505.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
510.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
515.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
520.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
525.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
530.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
535.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
540.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
545.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
550.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
555.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
560.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
565.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
570.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
575.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
580.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
585.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
590.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
595.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	
600.02002	3.74674803	14.455378	2.54878032	14.305	8535.75	8507.5	72.5	72.5	70.9	72.1	0.00145	

Spot/Plane Sensor Testing

TEST NR0172_7 21 MAY 1987 WEC SPOC1													
SENSOR ID	MAIN DUCT (SAS INLET)	GAS PACT (OUTLET)	OUTLET (PPM)	DET/NOISE AMBIENT	FLAMMABLE	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)	TEMP (°F)
803.11032	3.74235948	14.4842824	14.5035	8637.5	71.1	72.8	70.1	72.1	72.1	72.1	72.1	72.1	72.1
803.07061	3.71758193	14.4842824	14.50425	8639.5	71.1	72.7	70.2	72.1	72.1	72.1	72.1	72.1	72.1
815.02002	3.72236032	14.4842824	14.50379	8640	70.9	72.7	70.2	72.1	72.1	72.1	72.1	72.1	72.1
815.03	3.72448119	14.4837878	14.50275	8639.5	70.9	72.7	70.2	72.1	72.1	72.1	72.1	72.1	72.1
833.07061	3.72713656	14.4837878	14.502	8638.25	70.8	72.7	70.3	72.1	72.1	72.1	72.1	72.1	72.1
833.03002	3.74485286	14.4842824	14.5035	8639	70.8	72.7	70.3	72.1	72.1	72.1	72.1	72.1	72.1
833.08002	3.74871717	14.4842824	14.50275	8639.25	70.9	72.7	70.2	72.1	72.1	72.1	72.1	72.1	72.1
833.02002	3.73811576	14.4842824	14.50425	8639.5	71.1	72.7	70.1	72.1	72.1	72.1	72.1	72.1	72.1
846.03002	3.74345622	14.4837878	14.50425	8639.5	71.1	72.7	70.1	72.1	72.1	72.1	72.1	72.1	72.1
846.06002	3.74325473	14.4837878	14.5035	8612.25	71.2	72.7	70.1	72.1	72.1	72.1	72.1	72.1	72.1
853.10061	3.73548717	14.4842824	14.50425	8637.5	71.1	72.7	70.1	72.1	72.1	72.1	72.1	72.1	72.1
853.03002	3.7423231	14.4837878	14.503	8612.5	71.1	72.7	70.1	72.1	72.1	72.1	72.1	72.1	72.1
853.08002	3.72111028	14.4837878	14.5035	8639.5	71.1	72.7	70.1	72.1	72.1	72.1	72.1	72.1	72.1
853.10061	3.75623515	14.4837878	14.50425	8617	70.8	72.6	70.1	72.1	72.1	72.1	72.1	72.1	72.1
873.02002	3.71102347	14.4837878	14.50425	8618.5	70.9	72.6	70.1	72.1	72.1	72.1	72.1	72.1	72.1
883.03002	3.73548717	14.4837878	14.5035	8614	71.1	72.6	70.1	72.1	72.1	72.1	72.1	72.1	72.1
883.08002	3.72236032	14.4837878	14.50425	8619.25	71.2	72.9	69.9	72.1	72.1	72.1	72.1	72.1	72.1
893.03	3.74548717	14.4837878	14.50425	8624.5	71.1	72.8	69.8	72.1	72.1	72.1	72.1	72.1	72.1
893.13	3.72323579	14.4842824	14.50425	8628.25	71.1	72.6	69.9	72.1	72.1	72.1	72.1	72.1	72.1
705.02002	3.72236032	14.4837878	14.5035	8630.5	71.1	72.6	69.8	72.1	72.1	72.1	72.1	72.1	72.1
705.07061	3.71485198	14.4837878	14.505	8629.5	71.1	72.6	69.8	72.1	72.1	72.1	72.1	72.1	72.1
710.02002	3.72485198	14.4837878	14.5035	8629.5	71.1	72.6	69.8	72.1	72.1	72.1	72.1	72.1	72.1
719.02002	3.72485198	14.4837878	14.5035	8632.25	71.1	72.9	69.9	72.1	72.1	72.1	72.1	72.1	72.1
719.03002	3.72485198	14.4837878	14.5035	8632.25	71.1	72.9	69.9	72.1	72.1	72.1	72.1	72.1	72.1
725.02002	3.73131555	14.4842824	14.5035	8630.5	70.8	72.8	69.9	72.1	72.1	72.1	72.1	72.1	72.1
725.03002	3.71923447	14.4842824	14.5035	8628.25	70.8	72.6	69.9	72.1	72.1	72.1	72.1	72.1	72.1
725.04001	3.71485198	14.4842824	14.5035	8634	70.6	72.8	70.1	72.1	72.1	72.1	72.1	72.1	72.1
740.02002	3.71433331	14.4842824	14.502	8622.25	70.5	72.7	69.8	72.1	72.1	72.1	72.1	72.1	72.1
740.03002	3.71433331	14.4842824	14.5035	8619.5	70.4	72.6	70.1	72.1	72.1	72.1	72.1	72.1	72.1
750.02002	3.74248717	14.4842824	14.5035	8618.5	70.4	72.5	69.9	72.1	72.1	72.1	72.1	72.1	72.1
750.11002	3.74248717	14.4842824	14.5035	8618.5	70.4	72.5	69.9	72.1	72.1	72.1	72.1	72.1	72.1
760.02002	3.73424535	14.4837878	14.50375	8618.5	70.4	72.7	69.8	72.1	72.1	72.1	72.1	72.1	72.1
765.07061	3.71110238	14.4837878	14.50275	8618.5	70.3	72.7	69.8	72.1	72.1	72.1	72.1	72.1	72.1
770.04001	3.71100704	14.4837878	14.5035	8630	70.3	72.8	69.8	72.1	72.1	72.1	72.1	72.1	72.1
775.02002	3.71485198	14.4837878	14.5035	8625	70.3	72.7	69.8	72.1	72.1	72.1	72.1	72.1	72.1
780.03	3.73571244	14.4842824	14.50425	8625.25	70.3	72.6	69.8	72.1	72.1	72.1	72.1	72.1	72.1
785.02002	3.70297745	14.4842824	14.505	8635.25	70.3	72.7	69.7	72.1	72.1	72.1	72.1	72.1	72.1
790.02002	3.72111028	14.4851276	14.50425	8642	70.4	72.7	69.7	72.1	72.1	72.1	72.1	72.1	72.1
795.05002	3.70422798	14.4837878	14.50425	8643.25	70.3	72.7	69.7	72.1	72.1	72.1	72.1	72.1	72.1

Suppose that

TEST RUN 12, 9, 21 May, 1967, WEC-SP-001											
SECONDS	MAIN INJECT DIFF IN H2O	MAIN INJECT ABS (PSIA)	MAIN ORGT DIFF IN H2O	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PSIA)	DETRONIC AMBIENT TEMP (°F)	FLAMMABLE TEMP (°F)	MAIN DUST WHI. CELL TEMP (°F)	WHI. CELL (VOLTS)		
200.00000	3.7682000	14.45330	2.9630476	14.502	8290	6503	71.0	72.9	72.7	0.00115	
205.00000	3.7123505	14.457818	2.9630476	14.502	8296.5	6603	71.7	72.5	72.7	0.00114	
210.00000	3.73290608	14.456391	2.9611634	14.502	8306.75	6505	71.6	72.8	72.7	0.00115	
215.00000	3.7142331	14.4580603	2.96034	14.50135	8312.5	6503.25	71.4	72.8	72.7	0.00117	
220.00000	3.71940285	14.4603625	2.96054	14.50275	8316.5	6507.75	71.4	72.6	72.7	0.00116	
225.00000	3.7403670	14.4601306	2.96064	14.50128	8321.75	6505	71.4	72.6	72.7	0.00118	
230.00000	3.7691254	14.4601306	2.959683698	14.49875	8329.75	6607.5	71.1	72.8	72.7	0.00119	
235.00000	3.72236802	14.46071322	2.960268012	14.48975	8335.75	6605	71.2	72.6	72.7	0.00116	
240.00000	3.71681012	14.45686314	2.95868368	14.50275	8338.5	6505	71.2	72.6	72.7	0.00112	
245.00000	3.75420456	14.45788718	2.959601456	14.502	8349.5	6607.75	71.2	72.7	72.7	0.00121	
250.00000	3.73924231	14.48129298	2.95616192	14.502	8353.5	6607.75	71.2	72.7	72.7	0.00123	
255.00000	3.71102895	14.4601306	2.95678736	14.50135	8366	6607.75	71.3	72.6	72.7	0.00123	
260.00000	3.72236802	14.4601306	2.95616192	14.50135	8369.75	6607.5	71.3	72.7	72.7	0.00122	
265.00000	3.73290608	14.4603625	2.95678736	14.50128	8369.75	6607.5	71.3	72.7	72.7	0.00122	
270.00000	3.71681012	14.45686314	2.95747138	14.50125	8367	6505	71.2	72.7	72.7	0.00125	
275.00000	3.71367938	14.45686314	2.956575735	14.502	8375.5	6607.75	71.2	72.7	72.7	0.00124	
280.00000	3.71681012	14.45788718	2.95681632	14.49375	8374	6505	71.3	72.7	72.6	0.00123	
285.00000	3.71681012	14.45788718	2.95681632	14.49375	8378	6505	71.3	72.7	72.6	0.00125	
290.00000	3.70962038	14.4601306	2.95616192	14.4975	8382.75	6607.5	71.5	72.8	72.7	0.00122	
295.00000	3.7024371	14.4571332	2.95616192	14.495	8387.5	6607.75	71.5	72.8	72.7	0.00125	
300.00000	3.7299608	14.4603625	2.95616192	14.49225	8396.75	6607.5	71.3	72.7	72.7	0.00128	
305.00000	3.71718255	14.4603625	2.95616192	14.49825	8398.25	6505	71.1	72.7	72.7	0.00127	
310.00000	3.71681012	14.45686314	2.95616192	14.4975	8398	6607.5	71	72.7	72.6	0.00128	
315.00000	3.74671198	14.459391	2.9536019	14.489	8401	6505	70.8	72.7	72.6	0.001328	
320.00000	3.7242371	14.4571332	2.95616192	14.49675	8410	6505	70.8	72.7	72.7	0.00134	
325.00000	3.7242371	14.45788718	2.95616192	14.49675	8415	6505	70.8	72.7	72.7	0.00134	
330.00000	3.73290608	14.4603625	2.95616192	14.495	8419.25	6607.5	71	72.8	72.7	0.00131	
335.00000	3.71542038	14.4571332	2.95616192	14.4975	8419.25	6607.5	71	72.8	72.7	0.00132	
340.00000	3.71718255	14.4603625	2.95616192	14.4975			71.5	72.6	72.6	0.00133	
345.00000	3.73924231	14.48129298	2.95616192	14.495	8424	6607.75	71.5	72.7	72.7	0.00133	
350.00000	3.77090295	14.462631	2.960268012	14.492631	8432	6607.75	71.5	72.8	72.7	0.00133	
355.00000	3.7373673	14.48171308	2.95240928	14.498	8436.25	6607.5	71.5	72.7	72.7	0.00134	
360.00000	3.7081038	14.459391	2.95178384	14.498	8438	6505.25	71.6	72.8	72.6	0.00133	
365.00000	3.77670988	14.4871332	2.95240928	14.496	8440.75	6607.75	71.7	72.8	72.6	0.00136	
370.00000	3.7423371	14.4816296	2.95240928	14.498	8443.25	6603	71.7	72.8	72.6	0.00135	
375.00000	3.73236514	14.4816296	2.951479384	14.49225	8447	6507.5	71.6	72.8	72.6	0.00136	
380.00000	3.72118802	14.45788718	2.95178384	14.4935	8454	6607.5	71.6	72.8	72.7	0.00137	
385.00000	3.72873771	14.48171308	2.95178384	14.4935	8462	6607.5	71.8	72.8	72.7	0.00138	
390.00000	3.72873771	14.48171308	2.95178384	14.489	8465.75	6607.5	71.8	72.8	72.7	0.00138	
395.00000	3.72873771	14.48171308	2.95178384	14.489	8465.75	6607.5	71.8	72.8	72.7	0.00138	

SpotFire Sensor Testing

TEST NR1212, 5, 21 May 1997 WGS SPOON											
SECONDS	MAIN DUCT DIFF (IN INCH)	WATER DUCT ABS (PSIA)	GAS INJECT DIFF (IN INCH)	GAS SUBJECT ABS (PSIA)	WATERTAKE DIFF (PSIA)	DETRONIC DIFF (PSIA)	ABSENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHT CELL TEMP (F)	WHT CELL (VOLTS)
400.00988	3.71522347	14.48038833	2.80718384	14.50125	5.686	6607.5	72	72.8	70.3	72.7	0.00132
405.00988	3.71522347	14.48038833	2.80718384	14.5005	6.686.5	6607.5	71.9	72.8	70.3	72.7	0.00138
410.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
415.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
420.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
425.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
430.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
435.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
440.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
445.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
450.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
455.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
460.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
465.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
470.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
475.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
480.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
485.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
490.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
495.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
500.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
505.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
510.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
515.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
520.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
525.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
530.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
535.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
540.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
545.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
550.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
555.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
560.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
565.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
570.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
575.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
580.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
585.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
590.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
595.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138
600.00988	3.71522347	14.48038833	2.80718384	14.49825	6.687.5	6607.5	72	72.8	70.3	72.8	0.00138

2000年5月24日

TEST LOG: 12.1.21 Nov 1987 MED. SPOND.												
SECURES	MAIN DUCT DIFF (IN H2O)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ABS (PSIA)	WRI/TAKER OUTPUT (PPM)	DETRONIC AMBIENT TEMP (°F)	FLAMMABLE TEMP (°F)	MAIN DUCT TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL VOLTS		
600.02596	3.723613	14.480710	2.94532944	14.43835	8546.75	6607.9	70.3	73.9	53.9	72.5		
605.04368	3.74111812	14.4589314	2.94651508	14.49026	8547.5	6607.5	70.3	72.3	59.9	72.4		
610.01939	3.71723955	14.4578013	2.94611548	14.5005	8548.5	6607.5	70.3	72.8	58.8	72.5		
615.00681	3.73233514	14.4893803	2.944394	14.43975	8548.5	6607.5	70.8	73.8	55.7	72.5		
620.03368	3.73787991	14.4893813	2.94651508	14.49026	8548.25	6607.5	70.7	72.8	56.7	72.5		
625.04639	3.70923216	14.4606803	2.94611548	14.49575	8554	6607.5	70.8	72.8	58.8	72.5		
630.03568	3.71110966	14.45738715	2.94651508	14.49575	8556.25	6607.5	70.9	73.3	54.7	72.5		
635.03568	3.73293041	14.4909383	2.94452944	14.4975	8557	6607.5	70.9	72.3	55.7	72.4		
640.01938	3.71360704	14.4606803	2.94611548	14.49925	8558.25	6607.5	70.9	72.8	58.7	72.4		
645.03568	3.71298177	14.4801308	2.94651508	14.50125	8560.75	6607.5	71.3	73.3	55.7	72.5		
650.02596	3.72599408	14.4939408	2.94651508	14.49875	8562	6607.5	71.1	72.9	58.8	72.5		
655.01938	3.71672135	14.49381	2.94365512	14.50125	8567.25	6607.5	71.2	72.8	58.8	72.4		
660.03568	3.71468738	14.49381	2.944894	14.49875	8572.5	6607.5	71.1	73.3	53.8	72.4		
665.01938	3.72717595	14.4606803	2.944904	14.50125	8577.25	6607.5	71.3	72.3	56.8	72.4		
670.03568	3.71737323	14.49381	2.94427368	14.496	8577.5	6607.5	70.7	72.9	58.8	72.4		
675.03568	3.74111882	14.459381	2.94437886	14.4975	8582	6607.5	70.7	72.9	58.8	72.5		
680.03568	3.71833347	14.49381	2.94532944	14.50125	8586.5	6607.5	70.6	72.9	58.8	72.4		
685.03568	3.71923347	14.4816299	2.94651508	14.49975	8590.5	6607.5	70.6	72.9	58.8	72.4		
690.02596	3.72973771	14.4606803	2.94437886	14.49925	8591.75	6607.5	70.4	72.9	58.7	72.5		
695.04639	3.73173535	14.4601308	2.94651508	14.49925	8598.5	6607.5	70.4	72.9	58.7	72.4		
700.03568	3.71733125	14.4606803	2.94651508	14.49925	8598.75	6607.5	70.3	72.9	58.7	72.4		
705.03568	3.73239394	14.4816299	2.94651508	14.5005	8597.5	6607.5	70.1	72.9	58.8	72.4		
710.03568	3.71310938	14.4606803	2.94365512	14.5005	8576.5	6607.5	70.1	72.9	58.8	72.4		
715.03568	3.70347637	14.4816299	2.94365512	14.50125	8579	6607.5	69.9	72.9	58.5	72.4		
720.03568	3.71642626	14.4811308	2.94878032	14.5005	8578	6607.5	69.9	72.9	58.4	72.4		
725.01938	3.70804898	14.4801308	2.94955512	14.49975	8579.75	6607.5	69.9	72.9	58.4	72.4		
730.03568	3.71797961	14.4801308	2.94365512	14.49975	8577.5	6607.5	69.8	72.9	58.4	72.4		
735.03568	3.70895447	14.46538512	2.94365512	14.50125	8580.25	6607.5	69.8	72.9	58.4	72.4		
740.03568	3.70710164	14.4827818	2.944804	14.5005	8582	6607.5	69.8	72.9	58.4			
745.03568	3.69577045	14.4836803	2.9447866	14.5005	8584.75	6607.5	69.4	72.4	58.4	72.5		
750.03568	3.71610812	14.4639803	2.944694	14.5005	8584.75	6607.5	70	72.9	58.4	72.4		
755.03	3.7158117	14.4639803	2.9447656	14.496	8585.5	6607.5	70	72.9	59.3	72.5		
760.03568	3.71635216	14.4631308	2.94477818	14.5005	8585.5	6607.5	70	72.9	59.3	72.4		
765.03568	3.69759753	14.49381	2.9437788	14.50125	8585.25	6607.5	70.2	72.8	58.3	72.4		
770.03568	3.698234788	14.4816299	2.94365512	14.50125	8585.25	6607.5	70.3	72.9	58.3	72.4		
775.01939	3.69797655	14.4631308	2.9417768	14.5005	8585	6607.5	70.3	72.9	58.3	72.4		
780.03568	3.7110596	14.4639803	2.94327498	14.50125	8586.75	6607.5	70.4	72.9	58.3	72.4		
785.03568	3.71381177	14.4671308	2.94327498	14.5005	8589	6607.5	70.4	72.9	58.3	72.3		
790.03568	3.71468738	14.4631308	2.9417768	14.5005	8587	6607.5	70.5	72.9	58.3	72.3		
795.03568	3.69772251	14.49381	2.9417768	14.498	8587.25	6607.5	70.6	72.8	58.3	72.3		

2009-2010

TEST: MS172, 5, 21 May 1967 WEC-SP-001											
SECURE	MAIN DUCT DIFF (IN H2O)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPHM)	CETRONIC AMBIENT TEMP (°F)	FLAMMABLE TEMP (°F)	MAIN DUCT WHIT CELL TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL TEMP (°F)
200.04999	3.71281177	14.4607335	2.94240224	14.59125	6907.5	6907.5	70.7	72.5	59.4	72.2	5.001158
805.08966	3.7173887	14.4607335	2.94240224	14.5925	6907.5	6907.5	70.8	72.5	59.4	72.3	5.001157
810.00966	3.73737461	14.4616286	2.94474868	14.6075	6907.5	6907.5	70.7	72.8	59.3	72.4	5.001158
815.03966	3.71266177	14.459391	2.9448934	14.4975	6907.5	6907.5	70.5	72.5	59.3	72.3	5.001157
820.13966	3.7199592	14.4689314	2.9411536	14.45125	6907.5	6907.5	70.4	72.5	59.3	72.3	5.001157
823.00966	3.72170295	14.469381	2.94302718	14.49825	6907.5	6907.5	70.4	72.8	59.2	72.4	5.001158
825.04999	3.72711028	14.4697305	2.94240224	14.49825	6907.5	6907.5	70.4	72.8	59.2	72.4	5.001157
835.13966	3.73173967	14.4699314	2.94177968	14.502	6907.5	6907.5	70.5	72.5	59.2	72.3	5.001156
840.20966	3.69892595	14.4616286	2.94240224	14.5025	6907.5	6907.5	70.6	72.8	59.2	72.2	5.001158
845.03	3.71215555	14.4607335	2.94240224	14.5035	6907.5	6907.5	70.7	72.5	59.2	72.3	5.001156
850.04999	3.69879728	14.460381	2.944904	14.50125	6907.5	6907.5	70.8	72.8	59.3	72.2	5.001158
855.00966	3.70715434	14.469381	2.94177968	14.502	6907.5	6907.5	70.8	72.8	59.2	72.3	5.001158
860.05966	3.70172881	14.4616286	2.94240224	14.502	6907.5	6907.5	71	72.8	59.1	72.2	5.001158
865.07966	3.72111538	14.4616286	2.94177968	14.50275	6907.5	6907.5	70.8	72.8	59.3	72.3	5.001158
870.00966	3.71544235	14.469381	2.94177968	14.502	6907.5	6907.5	70.8	72.8	59.2	72.2	5.001158
875.03966	3.70335218	14.4607335	2.94177968	14.50275	6907.5	6907.5	70.8	72.8	59.2	72.3	5.001158
880.56	3.72048521	14.4699381	2.9411536	14.5025	6907.5	6907.5	70.5	72.8	59.2	72.3	5.001158
885.00966	3.71594928	14.4699381	2.9411536	14.49825	6907.5	6907.5	70.4	72.8	59.3	72.3	5.001158
890.05966	3.72196259	14.4689314	2.94177968	14.498125	6907.5	6907.5	70.4	72.8	59.3	72.3	5.001158
895.00966	3.70071538	14.4571322	2.9411536	14.489	6907.5	6907.5	70.3	72.8	59.3	72.2	5.001158
900.00966	3.71718958	14.4571322	2.94240224	14.49825	6907.5	6907.5	70.3	72.8	59.4	72.2	5.001158

90% OF 15 min value

80% OF 15 min value

50% OF 15 min value

16 2 min value 40% ?

80% OF 15 min value

50% OF 15 min value

80% OF 15 min value

50% OF 15 min value

20% OF 15 min value

80% OF 15 min value

50% OF 15 min value

20% OF 15 min value

TEST: 432272_E_12 May '83 MEC-SPOOL											
SECTIONS	MAIN DUCT DIFF (IN H2O)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ABS (PSIA)	WHITTAKER OUTPUT (PPM)	DETRONIC AMBIENT (PPM)	FLAMMABLE TEMP (°F)	MAIN DUCT TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL VOLTS	
205.02002	3.90456348	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
206.02002	3.77675931	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
210.02002	3.81740186	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
215.02002	3.80427113	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
220.02002	3.7691354	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
225.02002	3.7643752	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
230.02002	3.76081893	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
235.02002	3.76081893	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
240.02002	3.76176579	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
245.02002	3.77326033	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
250.02002	3.77455923	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
255.02002	3.77564268	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
260.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
265.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
270.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
275.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
280.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
285.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
290.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
295.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
300.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
305.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
310.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
315.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
320.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
325.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
330.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
335.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
340.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
345.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
350.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
355.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
360.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
365.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
370.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
375.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
380.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
385.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
390.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
395.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	
400.02002	3.7668783	14.4866772	2.85330472	14.50425	51.0	5503.25	71.1	70.3	72.8	0.50105	

Suppose that

TEST: K5272.9 22 May 2007 NEDS-SPC03																
SECONDS	MAIN DUCT DIFF IN (°C)	MAIN DUCT ABS (°F)	MAIN DUCT DIFF IN (°C)	GAS SUBJECT DIFF IN (°C)	GAS INJECT ABS (°F)	WHITTAKER OUTPUT (PPM)	DETRONIC TEMP (°F)	FLAMMABLE TEMP (°F)	MAIN DUCT TEMP (°F)	WHIT CELL TEMP (°F)	WHIT CELL VOLTS					
600.00000	3.7421030	14.4681376	2.9417280	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001128					
806.00000	3.7794936	14.488378	2.9417785	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001128					
916.00000	3.7680593	14.4661218	2.94240324	14.50425	5307.75	6807.5	71.1	72.8	70.5	72.4	0.001128					
615.00000	3.73803726	14.4763688	2.94303224	14.50425	5307.75	6807.5	71.1	72.8	70.5	72.4	0.001128					
625.00000	3.80114464	14.4641278	2.94115136	14.50425	5307.75	6807.5	71.1	72.8	70.5	72.4	0.001128					
625.00000	3.79351525	14.46851766	2.94117368	14.50425	5307.75	6807.5	71.1	72.8	70.5	72.4	0.001128					
630.00000	3.83864606	14.4676385	2.94177688	14.50425	5307.75	6807.5	71.1	72.8	70.5	72.4	0.001128					
635.00000	3.79351525	14.46851766	2.94117368	14.50425	5307.75	6807.5	71.1	72.8	70.5	72.4	0.001128					
640.00000	3.82959537	14.4681278	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001128					
645.00000	3.79114662	14.4676388	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001128					
650.00000	3.78601849	14.46851766	2.94303224	14.50425	5307.75	6807.75	70.5	72.4	70.5	72.4	0.001132					
655.00000	3.79005453	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
660.00000	3.81142416	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
665.00000	3.78651063	14.46851766	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
670.00000	3.79813836	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
675.00000	3.78428255	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
680.00000	3.82346638	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
685.00000	3.79446782	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
690.00000	3.8176679	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
695.00000	3.82318564	14.46851766	2.9417768	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
700.00000	3.7794936	14.488378	2.9417785	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
705.00000	3.7680593	14.4661218	2.94240324	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
710.00000	3.73803726	14.4763688	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
715.00000	3.79351525	14.46851766	2.94117368	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
720.00000	3.80114464	14.4641278	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
725.00000	3.83864606	14.4676385	2.94177688	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
730.00000	3.79351525	14.46851766	2.94117368	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
735.00000	3.82959537	14.4681278	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
740.00000	3.79114662	14.4676388	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
745.00000	3.78601849	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
750.00000	3.79005453	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
755.00000	3.81142416	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
760.00000	3.78651063	14.46851766	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
765.00000	3.79813836	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
770.00000	3.78428255	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
775.00000	3.82346638	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
780.00000	3.79446782	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
785.00000	3.8176679	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
790.00000	3.82318564	14.46851766	2.9417768	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
795.00000	3.7794936	14.488378	2.9417785	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
800.00000	3.7680593	14.4661218	2.94240324	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
805.00000	3.73803726	14.4763688	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
810.00000	3.79351525	14.46851766	2.94117368	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
815.00000	3.80114464	14.4641278	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
820.00000	3.83864606	14.4676385	2.94177688	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
825.00000	3.79351525	14.46851766	2.94117368	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
830.00000	3.82959537	14.4681278	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
835.00000	3.79114662	14.4676388	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
840.00000	3.78601849	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
845.00000	3.79005453	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
850.00000	3.81142416	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
855.00000	3.78651063	14.46851766	2.94115136	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
860.00000	3.79813836	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
865.00000	3.78428255	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
870.00000	3.82346638	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
875.00000	3.79446782	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
880.00000	3.8176679	14.46851766	2.94303224	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
885.00000	3.82318564	14.46851766	2.9417768	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
890.00000	3.7794936	14.488378	2.9417785	14.50425	5307.75	6807.5	70.5	72.4	70.5	72.4	0.001132					
 					

TEST: K52272, S 22 May 1987 MEC-SPDOL													
SECONDS	MAIN DUCT OFF (IN ABS.)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN H ₂ O)	MAIN DUCT ABS (PSIA)	INJECTOR OUTLET (PSIA)	DETRONIC TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	INJECTOR TEMP (F)	WART CELL TEMP (F)	WART CELL VOLTS	WART CELL TEMP (F)	WART CELL VOLTS
800.02002	3.74482787	14.483378	2.9353485	14.5035	6452	6607.5	71.2	73	70.7	72.4	0.001138	72.4	0.001138
805.02002	3.75342787	14.483378	2.9353485	14.5035	6457	6607.5	71.3	73	70.7	72.4	0.001138	72.4	0.001138
810.02002	3.81032851	14.4678286	2.94118136	14.5035	6456.75	6607.5	71.4	73	70.7	72.4	0.001137	72.4	0.001137
815.02002	3.81956872	14.4675589	2.93927804	14.5035	6456.75	6607.5	71.4	73	70.9	72.5	0.001138	72.5	0.001138
820.02002	3.82035148	14.4668772	2.93927804	14.5035	6453.25	6607.5	71.4	73	70.9	72.5	0.001138	72.5	0.001138
825.02002	3.81078675	14.4676285	2.94117768	14.5035	6453.75	6607.5	71.5	73	71	72.6	0.001138	72.6	0.001138
830.02002	3.79884376	14.4646284	2.94115136	14.50275	6457	6607.5	71.8	73	71	72.2	0.001138	72.2	0.001138
835.04031	3.78676363	14.4638788	2.94252592	14.50425	6453.25	6607.5	71.9	73	71.1	72.4	0.001137	72.4	0.001137
840.02002	3.75925607	14.4646284	2.94117768	14.5035	6467.5	6607.5	72.1	73.1	71.2	72.5	0.001138	72.5	0.001138
845.02002	3.75508771	14.4641276	2.94118136	14.5035	6467.25	6607.5	72.1	73	71.2	72.5	0.001138	72.5	0.001138
850.02002	3.78301301	14.4646284	2.94260224	14.50425	6469.25	6607.5	72.3	73	71.1	72.5	0.001137	72.5	0.001137
855.0302	3.82803145	14.4688772	2.94117768	14.5035	6450.25	6607.5	72.3	73.1	71	72.5	0.001138	72.5	0.001138
860.02002	3.78501398	14.4646284	2.94118136	14.50425	6470	6607.5	72.4	73.1	71	72.5	0.001137	72.5	0.001137
865.02002	3.80427335	14.4638788	2.94115136	14.502	6470	6607.5	72.4	73.1	71	72.5	0.001138	72.5	0.001138
870.02002	3.77362366	14.4638788	2.94118136	14.50425	6470.5	6607.5	72.4	73.1	71.1	72.5	0.001138	72.5	0.001138
875.02002	3.79114052	14.465378	2.94117768	14.5035	6468.75	6607.5	72.5	73.1	71	72.4	0.001138	72.4	0.001138
880.02002	3.76363728	14.466318	2.93517768	14.50425	6468.5	6607.5	72.6	73.1	71.1	72.4	0.001138	72.4	0.001138
885.03013	3.76913306	14.465378	2.94115136	14.50425	6471	6607.5	72.7	73.1	71	72.5	0.001138	72.5	0.001138
890.02002	3.77930768	14.465378	2.94117768	14.50425	6472.75	6607.5	72.7	73.1	71.1	72.5	0.001138	72.5	0.001138
895.02	3.79676363	14.4638788	2.94240224	14.5035	6468.5	6607.5	72.9	73.1	71.3	72.4	0.001138	72.4	0.001138
900.02002	3.81304467	14.4646284	2.94117768	14.5035	6468.75	6607.5	72.8	73.1	71.2	72.5	0.001137	72.5	0.001137
END OF 11 min cycle													
WART													
Detronic													
2003.475													
PASS													
2 min value > 2003.475													
PASS													

Short-Pulse Sensor Testing

TEST: K32373_1 23 May 1987 MEC-SPDOX											
SECONDS	MAIN DUCT DIFF (IN H2O)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PPHM)	DETRONIC TEMP (F)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
0.000000	3.42348178	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.00021
0.000195	3.423481135	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000009
0.000390	3.42348048	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000011
0.000585	3.423479832	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000012
0.000780	3.423479180	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000013
0.000975	3.423478528	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000014
0.001170	3.423477876	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000015
0.001365	3.423477224	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000016
0.001560	3.423476572	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000017
0.001755	3.423475920	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000018
0.001950	3.423475268	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000019
0.002145	3.423474616	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000020
0.002340	3.423473964	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000021
0.002535	3.423473312	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000022
0.002730	3.423472660	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000023
0.002925	3.423472008	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000024
0.003120	3.423471356	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000025
0.003315	3.423470704	14.4038803	0.00018852	14.342275	32.925	70.3	70.3	71.1	70.3	72.3	0.000026
 

Sniff/Purge Sensor Testing

TEST RESULTS - 23 May 1987 MEC-SPAG											
SECONDS	DIFF IN H2O LAB (PSIA)	MAIN DUCT GAS INJECT	GAS INJECT	WHITAKER	DETRONIC	AMBIENT	FLAMMABLE	MAIN DUCT	WHIT CELL	WHIT CELL	
		DIFF IN H2O LAB (PSIA)	DIFF IN H2O LAB (PSIA)	OUTPUT (PPM)	(PPM)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	(VOLTE)	(VOLTE)
200.00002	3.43581338	14.4803338	0.08077108	14.34823	224.825	197.875	70.4	71	88.8	70.4	0.000235
205.00002	3.47722968	14.48038803	0.08032558	14.34828	225.2	197.875	70.5	71	88.8	72.4	0.000236
210.00002	3.41850378	14.48038803	0.081201872	14.3445	224.825	197.85	70.5	71	88.8	72.2	0.000236
215.00002	3.44033466	14.48038803	0.080333686	14.346	227.375	197.85	70.4	71	88.8	70.4	0.000235
220.00002	3.43789297	14.48042238	0.080378064	14.34225	224.175	197.875	70.5	70.6	88.7	72.3	0.000237
225.00002	3.41971682	14.4818298	0.081132228	14.34535	226.735	197.875	70.3	71	88.8	72.2	0.000236
230.00002	3.47810127	14.48038803	0.080889152	14.343	229.525	197.85	70.4	70.5	88.8	72.4	0.000235
235.00002	3.42411135	14.48038803	0.08101422	14.343	226.9	197.875	70.6	70.9	88.8	72.3	0.000236
240.00002	3.4311107	14.4818818	0.080513888	14.34525	228.525	197.85	70.5	70.8	88.8	72.2	0.000235
245.00002	3.41785433	14.48038803	0.081139128	14.34535	228.425	197.85	70.6	70.9	88.8	72.4	0.000236
250.00002	3.42541158	14.48038803	0.080536976	14.343	227.8	197.85	70.6	70.9	88.7	72.1	0.000236
255.00002	3.42541158	14.48038803	0.080513888	14.346	228.15	197.85	70.5	70.6	88.7	72.1	0.000236
260.00002	3.42888333	14.48038803	0.080703712	14.34535	228.175	197.825	70.6	70.9	88.7	72.4	0.000236
265.00002	3.42218919	14.48038803	0.080768084	14.348	230.825	197.85	70.7	70.9	88.7	72.3	0.000236
270.00002	3.41222968	14.48038803	0.08070132	14.34075	228.95	197.85	70.7	70.8	88.7	72.4	0.000236
275.00002	3.42733338	14.48038803	0.080226638	14.34535	230.65	197.85	70.7	70.9	88.7	72.1	0.000235
280.00002	3.45733338	14.48038803	0.080226638	14.34535	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
285.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
290.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
295.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
300.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
305.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
310.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
315.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
320.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
325.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
330.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
335.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
340.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
345.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
350.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
355.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
360.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
365.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
370.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
375.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
380.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
385.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
390.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
395.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236
400.00002	3.43038803	14.48038803	0.080536976	14.343	230.125	197.85	70.6	70.9	88.7	72.3	0.000236

Spot/Trace Sensor Testing

TEST: K0373_1_03 MAY 1997 WHE-SP-COL											
SECONDS	MAIN DUCT	MAIN DUCT	GAS INJECT	WHT/TAKE	DIETRONIC	AMBIENT	FLAMMABLE	MAIN DUCT	WHT CELL	WHT CELL	
	DIFF (IN FLOW)	ABS (PSIA)	DIFF (IN FLOW)	ABS (PSIA)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	
480.02002	3.43348778	14.4363314	0.08007638	14.346	233.573	187.95	70.5	70.5	68.6	72.1	0.000238
490.02002	3.43351155	14.4367338	0.08012172	14.3445	231.55	187.95	70.5	70.5	68.7	72.1	0.000238
500.02002	3.42722474	14.44919288	0.08128444	14.34375	242.575	187.95	70.5	70.5	68.7	72.1	0.000238
510.02002	3.43348824	14.4363314	0.080051836	14.3415	241.45	187.95	70.5	70.5	68.6	72.1	0.000238
520.02002	3.43348824	14.4363314	0.080051836	14.3445	241.75	187.95	70.5	70.5	68.7	72.1	0.000238
530.02002	3.43348824	14.4363314	0.080051836	14.34375	241.55	187.95	70.5	70.5	68.7	72.1	0.000238
540.02002	3.41285217	14.44901315	0.080051836	14.34375	241.75	187.95	70.5	70.5	68.7	72.1	0.000238
550.02002	3.43348824	14.4363314	0.080051836	14.346	241.75	187.95	70.5	70.5	68.7	72.1	0.000238
560.02002	3.42722474	14.44919288	0.08128444	14.34375	242.575	187.95	70.5	70.5	68.7	72.1	0.000238
570.02002	3.43348824	14.4363314	0.080051836	14.34225	246	187.95	70.5	70.5	68.7	72.1	0.000238
580.02002	3.44059145	14.4363314	0.080051836	14.34225	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
590.02002	3.42722474	14.44919288	0.08128444	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
600.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
610.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
620.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
630.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
640.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
650.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
660.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
670.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
680.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
690.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
700.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
710.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
720.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
730.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
740.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
750.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
760.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
770.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
780.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
790.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
800.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
810.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
820.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
830.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
840.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
850.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
860.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
870.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
880.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
890.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
900.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
910.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
920.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
930.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
940.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
950.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
960.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
970.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
980.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238
990.02002	3.43348824	14.4363314	0.080051836	14.343	248.775	187.95	70.5	70.5	68.7	72.1	0.000238

Spot/Place Sensor Testing

TEST: K03373 2 23 May 1987 WME-SPC01									
SECONDS	MAIN DUCT DIFF IN FOL ABS (PSIA)	MAIN DUCT DIFF IN REG (PSIA)	GAS INJECT ABS (PSIA)	WHISTAKER OUTPUT (PPM)	DEFLECTOR'S AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT WHART CELL TEMP (F)	WHART CELL VOLTS	WHART CELL VOLTS
1.010208	3.434 0703	14.4330255	0.828047215	14.343	72.7	72.8	72.7	73.1	0.00214
1.010888	3.44712803	14.44718948	0.82771504	14.3715	72.8	72.8	72.8	73.1	0.00211
10.011808	3.47108783	14.44488983	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00228
15.011808	3.40534383	14.4333841	0.82716416	14.3655	72.8	72.8	72.8	73.2	0.00287
20.011808	3.39947386	14.44488983	0.830360343	14.3715	72.8	72.8	72.8	73.3	0.00336
25.011808	3.42353555	14.44488983	0.82778868	14.3725	72.8	72.8	72.8	73.3	0.00374
30.011808	3.40847328	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00402
35.011808	3.39894708	14.4333841	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00422
40.011808	3.39855212	14.4328344	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00436
45.011808	3.40463839	14.4328344	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00448
50.011808	3.42384755	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00452
55.011808	3.42353555	14.4333841	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00461
60.011808	3.41722806	14.4333841	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00467
65.011808	3.40355847	14.4333841	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00467
70.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00478
75.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
80.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
85.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
90.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
95.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
100.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
105.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
110.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
115.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
120.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
125.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
130.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
135.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
140.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
145.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
150.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
155.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
160.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
165.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
170.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
175.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
180.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
185.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
190.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
195.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481
200.011808	3.41357109	14.4311332	0.82778868	14.3715	72.8	72.8	72.8	73.3	0.00481

Environ. Monit. Assess.

TEST LOG (1) - 23 May 387 REC-SP00															
SEC00000		MAIN DUCT		MAIN DUCT		GAS INJECT		GAS SUBJECT WHITTAKER		DETRONIC'S AMBIENT		MAIN ENTRY		WHRT CELL	
DIFF (IN/2) ABS (PSIA)		DIFF (IN/2) ABS (PSIA)		DIFF (IN/2) ABS (PSIA)		DIFF (IN/2) ABS (PSIA)		DIFF (IN/2) ABS (PSIA)		TEMP (F)		TEMP (F)		TEMP (F)	
200.011909	3.43033031	3.43033031	14.4513304	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000464
205.011909	3.41722905	14.4511848	14.3695	0.8277896	14.3695	14.3695	14.3695	14.3695	14.3695	2002.25	72.2	72.2	72.2	72.2	0.000483
210.011909	3.41464706	14.4511352	14.37075	0.8277896	14.37075	14.37075	14.37075	14.37075	14.37075	2002.25	72.2	72.2	72.2	72.2	0.000464
215.011909	3.40783031	14.4513304	14.37175	0.828281936	14.37175	14.37175	14.37175	14.37175	14.37175	2002.25	72.2	72.2	72.2	72.2	0.000483
220.011909	3.40619687	14.4535354	14.37175	0.828281936	14.37175	14.37175	14.37175	14.37175	14.37175	2002.25	72.2	72.2	72.2	72.2	0.000483
225.011909	3.40819365	14.4511352	14.36775	0.8277896	14.36775	14.36775	14.36775	14.36775	14.36775	2002.25	72.2	72.2	72.2	72.2	0.000464
230.011909	3.42411773	14.4503636	14.37225	0.8277896	14.37225	14.37225	14.37225	14.37225	14.37225	2002.25	72.2	72.2	72.2	72.2	0.000464
235.011909	3.41987995	14.4511352	14.36928	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000483
240.011909	3.42050658	14.4511352	0.8277896	14.3695	14.3695	14.3695	14.3695	14.3695	14.3695	2002.25	72.2	72.2	72.2	72.2	0.000497
245.011909	3.39977215	14.4511332	14.36775	0.8277896	14.36775	14.36775	14.36775	14.36775	14.36775	2002.25	72.2	72.2	72.2	72.2	0.000468
250.011909	3.41727925	14.4503534	0.8277896	14.37175	14.37175	14.37175	14.37175	14.37175	14.37175	2002.25	72.2	72.2	72.2	72.2	0.000487
255.011909	3.44059635	14.4513304	0.828281936	14.36775	14.36775	14.36775	14.36775	14.36775	14.36775	2002.25	72.2	72.2	72.2	72.2	0.000468
260.011909	3.41603372	14.4511332	0.828281936	14.36775	14.36775	14.36775	14.36775	14.36775	14.36775	2002.25	72.2	72.2	72.2	72.2	0.000468
265.011909	3.43048175	14.4511848	0.828281936	14.3695	14.3695	14.3695	14.3695	14.3695	14.3695	2002.25	72.2	72.2	72.2	72.2	0.000497
270.011909	3.42568334	14.4526544	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
275.011909	3.42373448	14.4488963	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
280.011909	3.43456405	14.4511332	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000487
285.011909	3.40436835	14.4511332	0.828281936	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000497
290.011909	3.41035138	14.4511848	0.828281936	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
295.011909	3.39979923	14.4503634	0.828281936	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
300.011909	3.42397777	14.4511848	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000497
305.011909	3.40222288	14.4535354	0.828281936	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
310.011909	3.41669375	14.4503534	14.3695	0.8277896	14.3695	14.3695	14.3695	14.3695	14.3695	2002.25	72.2	72.2	72.2	72.2	0.000487
315.011909	3.40289475	14.4526544	14.37	0.8277896	14.37	14.37	14.37	14.37	14.37	2002.25	72.2	72.2	72.2	72.2	0.000468
320.011909	3.40972982	14.4541337	0.828281936	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
325.011909	3.421489395	14.4541337	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000497
330.011909	3.40222288	14.4511332	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
335.011909	3.43973448	14.4511848	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000497
340.011909	3.423979328	14.4526544	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
345.011909	3.41697632	14.4503636	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000487
350.011909	3.40783031	14.4503534	14.3695	0.8277896	14.3695	14.3695	14.3695	14.3695	14.3695	2002.25	72.2	72.2	72.2	72.2	0.000468
355.011909	3.427731338	14.4526544	14.3695	0.8277896	14.3695	14.3695	14.3695	14.3695	14.3695	2002.25	72.2	72.2	72.2	72.2	0.000468
360.011909	3.40973562	14.4511332	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
365.011909	3.39159238	14.4488963	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000487
370.011909	3.41597762	14.4511848	14.37	0.8277896	14.37	14.37	14.37	14.37	14.37	2002.25	72.2	72.2	72.2	72.2	0.000468
375.011909	3.42840392	14.4526544	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000487
380.011909	3.43541136	14.4526544	0.828281936	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000487
385.011909	3.39226353	14.4488963	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468
390.011909	3.39471834	14.4526544	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000487
395.011909	3.39847096	14.4511848	0.8277896	14.36928	14.36928	14.36928	14.36928	14.36928	14.36928	2002.25	72.2	72.2	72.2	72.2	0.000468

[illegible]

TEST: 02/03/22 21 Nov 1967 REC: SP001												
SECONDS	MAIN DUCT DIFF (IN)	MAIN DUCT ABS (PSIA)	MAIN ELECT (SAE INJECT DIFF IN H2O)	GAS INJECT (SAE INJECT DIFF (PSIA))	INLET/OUTLET (PSIA)	DETHRONES (PSIA)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN ELECT PART TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS	
400.01909	3.43348824	14.4511330	0.82777690	14.38633	1832.75	2002.25	72.3	72.6	73.1	73.3	0.000691	
405.01909	3.40761601	14.4511332	0.82777866	14.3868	1832.5	2002.25	72.2	72.7	73.2	73.3	0.000498	
410.01909	3.42722008	14.4511332	0.827778416	14.3865	1833.5	2002	72.2	72.7	73.2	73.3	0.0003	
415.04001	3.42846362	14.4513344	0.82778416	14.3865	1832.75	2002.25	72.3	72.6	73.2	73.3	0.000498	
420.01909	3.43038305	14.4511332	0.82778416	14.38625	1833.5	2002.25	72.3	72.6	73.2	73.3	0.000498	
425.01909	3.42595648	14.4511332	0.82651872	14.3865	1833.75	2002	72.2	72.7	73.2	73.4	0.000498	
430.01909	3.42656968	14.4518848	0.82777696	14.3865	1833.5	2002.25	72.3	72.7	73.2	73.4	0.000498	
435.01909	3.42910616	14.4511332	0.82646824	14.38625	1834.25	2002	72.3	72.7	73.1	73.3	0.000498	
440.01909	3.42033877	14.4498355	0.82653872	14.38775	1833.5	2002.25	72.4	72.7	73.1	73.3	0.000498	
445.01909	3.42786865	14.4511332	0.82778416	14.3865	1834	2002.25	72.4	72.7	73.1	73.4	0.000498	
450.01909	3.42564785	14.4486166	0.82778416	14.387	1834.5	2002.25	72.4	72.7	73.2	73.5	0.0005	
455.01909	3.42564785	14.4486166	0.82778416	14.387	1834.5	2002.25	72.4	72.7	73.2	73.5	0.0005	
460.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
465.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
470.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
475.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
480.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
485.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
490.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
495.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
500.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
505.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
510.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
515.01909	3.42223122	14.4481925	0.82778416	14.3865	1837.5	2002.25	72.5	72.6	73.2	73.4	0.000498	
520.01909	3.42348176	14.4498355	0.82778416	14.38625	1840.75	2002.25	72.6	72.7	73.1	73.4	0.0005	
525.01909	3.42348176	14.4498355	0.82778416	14.38625	1840.75	2002.25	72.6	72.7	73.1	73.4	0.0005	
530.01909	3.4284785	14.4503956	0.82633872	14.38675	1842.25	2002.25	72.3	72.8	73.1	73.4	0.0005	
535.01909	3.4284785	14.4503956	0.82633872	14.38675	1842.25	2002.25	72.3	72.8	73.1	73.4	0.0005	
540.01909	3.42786865	14.4511332	0.82653872	14.38775	1846.5	2002.25	72.4	72.8	73.2	73.5	0.0005	
545.04001	3.42786865	14.4511332	0.82653872	14.38775	1846.5	2002.25	72.4	72.8	73.2	73.5	0.0005	
550.01909	3.42656968	14.4513344	0.82778416	14.38625	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
555.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
560.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
565.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
570.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
575.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
580.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
585.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
590.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
595.01909	3.42595648	14.4511332	0.82651872	14.3865	1846.5	2002.25	72.3	72.6	73.1	73.3	0.000498	
 	

TEST K5373 2 23 MAR 1987 NEW YORK

SEC/NOS	MAIN DUCT DIFF (IN H2O)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF (IN H2O)	GAS INJECT ABS (PSIA)	W/RTAKER OUTPUT (PSIA)	DETROIT'S AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	W/RT TEMP (F)	CELL TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
600	0.9368	14.126437	14.452634	14.3693	1347.5	2032.25	71.5	72.5	71.5	73.1	73.1	0.003501
605	0.9859	14.122268	14.4518848	14.37116	1467.5	2100.5	71.5	72.5	71.5	73.3	73.3	0.003501
610	0.9866	14.178263	14.4516848	14.37175	1484.5	2101.5	71.5	72.6	71.5	73.3	73.3	0.003501
615	0.9186	14.0972582	14.4506304	14.3715	1468.75	2032.25	71.4	72.6	71.4	73.3	73.3	0.003502
620	0.930	14.0474795	14.4528154	14.37225	1348.75	2032.25	71.5	72.6	71.5	73.1	73.1	0.003502
625	0.9180	14.0722474	14.4525354	14.37175	1348.25	2032.25	71.6	72.6	71.4	73.1	73.1	0.003501
630	0.916	14.0347712	14.4525354	14.3715	1348.5	2032.25	71.5	72.5	71.4	73.1	73.1	0.003501
635	0.91	14.0514983	14.4525354	14.3680	1350	2032.25	71.5	72.5	71.4	73.4	73.4	0.003502
640	0.9366	13.9647995	14.4535344	14.3685	1350	2032.25	71.5	72.5	71.4	73.4	73.4	0.003502
645	0.9168	14.0248175	14.4541337	14.3682	1349.5	2032.25	71.4	72.5	71.3	73.3	73.3	0.003502
650	0.91	13.9863515	14.4523354	14.36932	1350.5	2032	71.4	72.5	71.4	73.1	73.1	0.003502
655	0.9180	14.0156731	14.4525344	14.3675	1350.75	2032.5	71.3	72.5	71.3	73.3	73.3	0.003502
660	0.918	13.9863515	14.4525344	14.3715	1352.5	2032.5	71.2	72.5	71.2	73.3	73.3	0.003502
665	0.94021	14.0216055	14.4511532	14.3680	1353.75	2032.25	71.1	72.5	71.1	73.3	73.3	0.003502
670	0.9366	14.0514675	14.4519344	14.3685	1354	2032.25	71.1	72.5	71.1	73.3	73.3	0.003502
675	0.9198	14.0474712	14.4518344	14.36775	1354	2032.25	71.1	72.5	71.1	73.3	73.3	0.003502
680	0.91	14.0247312	14.4511532	14.3685	1354.5	2100.5	71.1	72.5	71.1	73.3	73.3	0.003503
685	0.918	14.0347712	14.4511532	14.3685	1354.5	2091	71.1	72.5	71.1	73.3	73.3	0.003503
690	0.9189	13.9816938	14.4518344	14.367	1355.75	2100.25	71.1	72.5	71.1	73.3	73.3	0.003503
695	0.91	14.0156755	14.4518344	14.367	1355.75	2100.5	71.1	72.5	71.1	73.3	73.3	0.003503
700	0.9369	14.0216073	14.4518344	14.3675	1356.25	2100.5	71.1	72.5	71.1	73.3	73.3	0.003503
705	0.9189	14.0474933	14.4518344	14.3675	1356.25	2100.5	71.1	72.5	71.1	73.3	73.3	0.003503
710	0.94021	13.9863515	14.4518344	14.3675	1356.75	2100.5	71.1	72.5	71.1	73.3	73.3	0.003503
715	0.94021	13.9863515	14.4518344	14.3675	1356.75	2100.5	71.1	72.5	71.1	73.3	73.3	0.003503
715	0.94021	13.9863515	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
720	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
725	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
730	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
735	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
740	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
745	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
750	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
755	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
760	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
765	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
770	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
775	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
780	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
785	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
790	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
795	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503
800	0.9189	14.0156755	14.4518344	14.3675	1356.75	2100.5	71.1	72.4	71.1	73.3	73.3	0.003503

TEST K5277_2 23 May 1987 WPC-SPCCL									
SECONDS	MAIN DUCT	MAIN DUCT GAS BAROT	GAS INJECT	WPI/TANER	DETRONICS AMBIENT FLAMMABLE	MAIN DUCT TEMP (°F)	WPI CELL TEMP (°F)	WPI CELL	WPI CELL
	DIFF (IN 1400 ASS. PSIG)	DIFF (IN 1400 ASS. PSIG)	ASS. (PSIA)	OUTPUT (PPM)	TEMP (°F)	TEMP (°F)	TEMP (°F)	(VOLTS)	(VOLTS)
800.01968	3.4072980	14.4541337	0.82718416	14.38923	2100.5	70.9	71.1	73.2	0.000504
800.04985	3.40347312	14.4528344	0.8277898	14.36778	2100.5	70.9	71.1	73.2	0.000504
810.01888	3.40472068	14.4511350	0.82718416	14.36835	2100.25	71	71.1	73.2	0.000508
815.01968	3.39847096	14.4533841	0.8277898	14.37	2100.5	71	70.9	73.1	0.000508
815.01901	3.41036108	14.4518948	0.82718416	14.3686	2100.25	71	70.9	73.1	0.000508
820.01888	3.41916467	14.4533841	0.82718416	14.3685	1971.75	70.9	70.9	73.1	0.000508
830.01	3.42795985	14.4511352	0.82718416	14.3695	1972.5	71	70.9	73.1	0.000508
835.08	3.42180895	14.4528344	0.82718416	14.3685	1969.75	71	70.9	73.1	0.000504
840.01888	3.3934688	14.4555344	0.82718416	14.36775	1970.25	71.2	71.2	73.2	0.000508
845.01968	3.39639515	14.4465344	0.82718416	14.36775	1971.25	71.2	71.1	73.2	0.000508
850.01968	3.4122306	14.4511352	0.82718416	14.36778	1972.5	71.1	71.1	73.2	0.000508
855.00869	3.40395411	14.4511352	0.82718416	14.36778	1972.5	71.2	71.1	73.2	0.000508
860.01968	3.39899575	14.4511352	0.82718416	14.36923	1972.5	71.2	71.1	73.2	0.000508
865.04001	3.40347312	14.4528344	0.82718416	14.3685	1971.75	71.2	71.1	73.1	0.000508
870.12968	3.40254683	14.4528344	0.82718416	14.3685	1973.5	71.2	70.9	73.1	0.000508
875.01968	3.40347312	14.4511352	0.82718416	14.367	1976.25	71.2	71.1	73.1	0.000507
880.04986	3.39899575	14.4511352	0.82718416	14.3685	1976.5	71.2	71.1	73.2	0.000508
885.04986	3.4122306	14.4511352	0.82718416	14.3685	1973.5	71.3	71.1	73.2	0.000508
890.01968	3.40254683	14.4511352	0.82718416	14.3685	1973.5	71.3	71.1	73.2	0.000508
895.04001	3.40254683	14.4511352	0.82718416	14.3685	1974.25	71.3	71.1	73.2	0.000508
900.01888	3.4122306	14.4528344	0.82718416	14.367	1971.5	71.3	71.1	73.2	0.000508

905 OF 15 run value 5.2 min value 5.00% ?

910 OF 15 run value 5.2 min value 5.00% ?

915 OF 15 run value 5.2 min value 5.00% ?

920 OF 15 run value 5.2 min value 5.00% ?

925 OF 15 run value 5.2 min value 5.00% ?

930 OF 15 run value 5.2 min value 5.00% ?

935 OF 15 run value 5.2 min value 5.00% ?

940 OF 15 run value 5.2 min value 5.00% ?

945 OF 15 run value 5.2 min value 5.00% ?

950 OF 15 run value 5.2 min value 5.00% ?

955 OF 15 run value 5.2 min value 5.00% ?

960 OF 15 run value 5.2 min value 5.00% ?

965 OF 15 run value 5.2 min value 5.00% ?

970 OF 15 run value 5.2 min value 5.00% ?

975 OF 15 run value 5.2 min value 5.00% ?

980 OF 15 run value 5.2 min value 5.00% ?

985 OF 15 run value 5.2 min value 5.00% ?

990 OF 15 run value 5.2 min value 5.00% ?

995 OF 15 run value 5.2 min value 5.00% ?

1000 OF 15 run value 5.2 min value 5.00% ?

1005 OF 15 run value 5.2 min value 5.00% ?

1010 OF 15 run value 5.2 min value 5.00% ?

1015 OF 15 run value 5.2 min value 5.00% ?

1020 OF 15 run value 5.2 min value 5.00% ?

1025 OF 15 run value 5.2 min value 5.00% ?

1030 OF 15 run value 5.2 min value 5.00% ?

1035 OF 15 run value 5.2 min value 5.00% ?

1040 OF 15 run value 5.2 min value 5.00% ?

1045 OF 15 run value 5.2 min value 5.00% ?

1050 OF 15 run value 5.2 min value 5.00% ?

1055 OF 15 run value 5.2 min value 5.00% ?

1060 OF 15 run value 5.2 min value 5.00% ?

1065 OF 15 run value 5.2 min value 5.00% ?

1070 OF 15 run value 5.2 min value 5.00% ?

TEST: 45311_3_23 May 1997 WED-SPD02											
SEC/DISC	MAIN DUCT DIFF IN ABS (PSI)	MAIN DUCT ABS (PSI)	GAS FUELT DIFF IN MDG (PSI)	GAS INJECT ABS (PSI)	WHITAKER OUTPUT (PPM)	DETRONICS PPM	FLAMMABLE TEMP (F)	TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOL (V)
0.010000	3.4354E17	14.447307	0.0003348	14.44826	33.75	33.75	71.6	70.9	72.8	0.002716	
0.010000	3.2630E23	14.4468375	1.7590464	14.4418	33.75	33.75	71.6	70.9	72.8	0.002716	
10.010000	3.4172E02	14.445332	1.73023952	14.4418	184.22	184.22	71.1	71.6	72.8	0.002716	
15.010000	3.4103E10	14.4466375	1.73023952	14.41725	808.75	808.75	71.1	71.6	72.8	0.002716	
20.010000	3.41087638	14.4468375	1.7315564	14.418	1587.75	1587.75	71.6	71.6	72.8	0.002716	
28.010000	3.39221855	14.4468375	1.73217384	14.41375	2145.5	2145.5	71.1	71.6	72.8	0.002716	
36.010000	3.42733335	14.4468375	1.73406218	14.415	2579.5	2579.5	71.1	71.6	72.8	0.002716	
38.010000	3.40847528	14.443630	1.73406218	14.41325	2887.5	2887.5	71.1	71.6	72.8	0.002716	
40.010000	3.41891047	14.4458878	1.73487278	14.4138	3084.25	3084.25	71.1	71.6	72.8	0.002716	
45.010000	3.40097204	14.4403993	1.73562848	14.415	3343.25	3343.25	71.1	71.6	72.8	0.002716	
50.010000	3.40348785	14.4433656	1.73592848	14.4195	3369	3369	71.6	71.6	72.8	0.002716	
55.010000	3.40097204	14.4443368	1.73592848	14.413	3432.25	3432.25	71.3	71.6	72.8	0.002716	
60.010000	3.40348785	14.4433656	1.73592848	14.41575	3511.25	3511.25	71.6	71.6	72.8	0.002716	
58.010000	3.4022298	14.4488176	1.73592848	14.4195	3578	3578	71.3	71.6	72.8	0.002716	
70.010000	3.3697715	14.4443368	1.73655392	14.41375	3623.75	3623.75	71.3	71.6	72.8	0.002716	
75.010000	3.35947634	14.4443368	1.73655392	14.418	3581	3581	71.3	71.6	72.8	0.002716	
80.010000	3.3597215	14.440232	1.73655392	14.4195	3685	3685	71.3	71.7	72.8	0.002716	
85.010000	3.35784569	14.4443368	1.7376046	14.41875	3718.5	3718.5	71.3	71.7	72.8	0.002716	
90.010000	3.42051616	14.4443368	1.73943024	14.41875	3796	3796	71.3	71.7	72.8	0.002716	
95.010000	3.42051616	14.4443368	1.73943024	14.413	3775.75	3775.75	71.4	71.7	72.8	0.002716	
100.010000	3.3940407	14.4443368	1.73955585	14.418	3757.25	3757.25	71.3	71.7	72.8	0.002716	
110.010000	3.40347312	14.4408178	1.73955585	14.41875	3819.75	3819.75	71.3	71.6	72.8	0.002716	
115.010000	3.41752266	14.4443368	1.7370248	14.41425	3819.75	3819.75	71.3	71.6	72.8	0.002716	
115.010000	3.40855847	14.4443368	1.73955585	14.41575	3838.75	3838.75	71.4	71.6	72.8	0.002716	
120.010000	3.39784858	14.4443368	1.73843024	14.41875	3843.25	3843.25	71.3	71.7	72.8	0.002716	
125.010000	3.38265566	14.445182	1.73905585	14.41575	3851.5	3851.5	71.3	71.7	72.8	0.002716	
130.010000	3.39784858	14.4443368	1.7403032	14.413	3893.25	3893.25	71.3	71.6	72.8	0.002716	
135.010000	3.40447295	14.4443368	1.73968112	14.41725	3867.25	3867.25	71.3	71.6	72.8	0.002716	
140.010000	3.40394735	14.443639	1.73905585	14.4185	3878.5	3878.5	71.4	71.7	72.8	0.002716	
145.010000	3.42283648	14.443639	1.7406932	14.4185	3886	3886	71.6	71.7	72.8	0.002716	
150.010000	3.42026541	14.4441866	1.7416574	14.41575	3898.5	3898.5	71.4	71.7	72.8	0.002716	
155.010000	3.36841096	14.4451382	1.73810588	14.418	3906.5	3906.5	71.6	71.7	72.8	0.002716	
160.010000	3.42442638	14.4443368	1.7403032	14.41375	3913	3913	71.5	71.7	72.8	0.002716	
155.010000	3.40284785	14.443839	1.7403032	14.41875	3829.5	3829.5	71.4	71.7	72.8	0.002716	
170.010000	3.36973832	14.4443368	1.7403032	14.41875	3858.5	3858.5	71.4	71.7	72.8	0.002716	
175.010000	3.34510467	14.4434132	1.73686112	14.413	3938	3938	71.6	71.7	72.8	0.002716	
180.010000	3.34181047	14.4434132	1.73686112	14.415	3938.5	3938.5	71.6	71.7	72.8	0.002716	
185.010000	3.34055646	14.4438393	1.7403032	14.41575	3940.5	3940.5	71.6	71.7	72.8	0.002716	
190.010000	3.41031999	14.4438393	1.7403032	14.413	3942.25	3942.25	71.4	71.7	72.8	0.002716	
195.010000	3.40855847	14.4438393	1.7403032	14.413	3948.25	3948.25	71.4	71.8	72.3	0.0008	

 

TEST: M22213_3_13 May 1987 WFO-SP003

SECORE	MAIN DUCT DIFF IN H2O ABS (PSIA)	MAIN DUCT GAS FLUCT DIFF IN H2O ABS (PSIA)	TEAR INJECT H2O FLUCT DIFF IN H2O ABS (PSIA)	DETRONIC AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOL (TS)
300.011909	3.43349726	14.4433039	1.7980112	14.41423	14.41423	3986.25	4403.5	72.3
305.011989	3.41519387	14.443306	1.74030698	14.41423	14.41423	3986.25	4403.5	72.3
310.011969	3.40119731	14.443638	1.74000095	14.41423	14.41423	3987	4403.5	72.5
315.011968	3.38534481	14.443638	1.74000095	14.41423	14.41423	3987	4403.5	72.5
320.011963	3.36934481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
325.011963	3.35334481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
330.011963	3.33734481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
335.011969	3.32134481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
340.011969	3.30534481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
345.011969	3.28934481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
350.011969	3.27334481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
355.011969	3.25734481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
360.011969	3.24134481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
365.011969	3.22534481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
370.011969	3.20934481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
375.011969	3.19334481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
380.011969	3.17734481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
385.011969	3.16134481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
390.011969	3.14534481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
395.011969	3.12934481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
400.011969	3.11334481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
405.011969	3.09734481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
410.011969	3.08134481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
415.011969	3.06534481	14.443636	1.74030696	14.41423	14.41423	3973	4403.5	72.5
 							

Spencer Tassier

TEST: 1422073 23 May 1987 WAC-49220L										
SECONDS	MAIN DUCT DIFF ON H2O ASSE (PSIA)	MAIN DUCT GAS INJECT DIFF ON H2O ASSE (PSIA)	GAS INJECT ABS (PSIA)	WHITENER OUTPUT (PPM)	OPTICONS PPM (PPM)	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOL (V)
505.015080	3.36221836	14.445118	1.7698112	14.4135	4308.75	4403.25	71.2	72.3	71.2	72.8
505.016260	3.36647066	14.4459178	1.74211208	14.4126	4308.75	4504.25	71.4	72.3	71.2	72.8
515.03	3.40641527	14.4451395	1.71901912	14.41426	4105.5	4504.25	71.3	72.3	71.2	72.8
515.03	3.42652107	14.4458878	1.74282952	14.4135	4101.75	4504.25	71.3	72.3	71.2	72.8
525.011888	3.43222258	14.4458878	1.74282952	14.4135	4104	4504.25	71.3	72.3	71.2	72.8
535.011888	3.43222258	14.4458878	1.74282952	14.4135	4104	4504.25	71.3	72.3	71.2	72.8
545.011888	3.43222258	14.4458878	1.74282952	14.4135	4104	4504.25	71.3	72.3	71.2	72.8
555.011888	3.39545036	14.445636	1.74282952	14.4135	4105.75	4504.25	71.4	72.3	71.2	72.8
555.011888	3.41558319	14.4458378	1.74211208	14.41426	4101.5	4504	71.4	72.3	71.2	72.8
560.011888	3.41722377	14.4451395	1.74211208	14.41426	4105.5	4504.25	71.5	72.3	71.2	72.8
564.04001	3.38847526	14.4451382	1.740532	14.41426	4303.75	4504.25	71.4	72.3	71.2	72.8
565.011888	3.41722306	14.4458378	1.74051288	14.4135	4304.25	4504.25	71.4	72.3	71.2	72.8
565.011888	3.40654947	14.4458378	1.74211208	14.4135	4308.75	4504.25	71.4	72.3	71.2	72.8
569.06	3.40281035	14.4458378	1.74211208	14.4126	4308.75	4504.25	71.4	72.3	71.2	72.8
569.511888	3.39784835	14.4458378	1.74040376	14.41426	4308.75	4403.5	71.5	72.3	71.2	72.8
570.511888	3.40471398	14.4451382	1.74280832	14.41426	4308	4504.25	71.4	72.3	71.2	72.8
575.73	3.40397342	14.4451382	1.74280832	14.41426	4308	4504.25	71.4	72.3	71.2	72.8
580.571888	3.39784835	14.4458378	1.74280832	14.415	4308.75	4504.25	71.5	72.3	71.2	72.8
585.07586	3.44286613	14.4443386	1.74280832	14.41426	4309.75	4504.25	71.5	72.3	71.2	72.8
590.12	3.40222259	14.4458378	1.740532	14.41505	4108.75	4504.25	71.3	72.3	71.2	72.8
595.511888	3.40786001	14.4451382	1.74280832	14.4138	4104.5	4504.25	71.4	72.3	71.2	72.8
730.36	3.41680279	14.4458378	1.74280832	14.41426	4104.25	4504.25	71.5	72.4	71.3	72.8
745.011888	3.41031109	14.4443386	1.74211208	14.41426	4108	4504.25	71.7	72.4	71.5	72.4
710.97989	3.42850811	14.4443386	1.74280832	14.41426	4108	4504.25	71.6	72.4	71.4	72.4
715.011888	3.41597853	14.4451385	1.74280832	14.41426	4105.75	4504.25	71.6	72.4	71.3	72.4
720.01969	3.40510065	14.4451382	1.74280832	14.41378	4102.75	4504	71.7	72.4	71.3	72.3
725.011888	3.40534877	14.4451381	1.74211208	14.41426	4105.75	4504.25	71.7	72.4	71.3	72.3
730.03001	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
735.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
740.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
745.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
750.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
755.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
760.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
765.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
770.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
775.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
780.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
785.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
790.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
795.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
800.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
805.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
810.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
815.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
820.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
825.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
830.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
835.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
840.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
845.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
850.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
855.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
860.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
865.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
870.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
875.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
880.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
885.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
890.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
895.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
900.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
905.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
910.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
915.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
920.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
925.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
930.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
935.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
940.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
945.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
950.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
955.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
960.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
965.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
970.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
975.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
980.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
985.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
990.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
995.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4
1000.011888	3.41850378	14.4451381	1.74280832	14.41426	4103.75	4504.25	71.6	72.4	71.2	72.4

SpeedPhase Sensor Testing

TEST K02013 3 13 May 1997 WEC-SPOOL									
SECONDS	MAIN DUCT DIFF (IN HOI) ABS (PSIA)	MAIN DUCT DIFF (IN HOI) ABS (PSIA)	GAS INJECT ABS (PSIA)	WHT FAHER DIFF (PSIA)	DETRONICS PPHM (PPHM)	TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHT CELL TEMP (F) VOLTS
800 01828	3.39471834	14.432883	14.4135	4132.5	4504.25	72.3	72.3	71.3	0.00827
800 01836	3.39774493	14.443893	14.415	4131.5	4504.25	72	72.5	71.4	0.00821
810 01885	3.37348018	14.442893	14.415	4131.5	4504.25	71.9	72.5	71.3	0.00825
815 01888	3.40810355	14.443633	14.4125	4133	4504.25	71.9	72.5	71.3	0.00822
820 01898	3.39847085	14.443533	14.41425	4133.5	4504.25	71.6	72.5	71.4	0.00824
825 01895	3.40159731	14.442893	14.41425	4121.5	4504	71.7	72.5	71.4	0.00824
830 01893	3.39966623	14.442893	14.415	4123.5	4504.25	71.7	72.5	71.2	0.00834
835 04899	3.40159731	14.442893	14.415	4123.5	4504.25	71.5	72.5	71.3	0.00825
840 01901	3.40159731	14.442893	14.41425	4122.5	4504.25	71.4	72.5	71.3	0.00834
845 01899	3.39784468	14.44182	14.41425	4122.5	4504.25	71.3	72.5	71.3	0.00834
850 01898	3.41600759	14.445182	14.41575	4123.25	4504.25	71.3	72.5	71.3	0.00823
855 01895	3.42348176	14.445182	14.41575	4123.25	4504.25	71.3	72.5	71.3	0.00824
860 01899	3.40159731	14.443533	14.41425	4123.5	4504.25	71.3	72.5	71.3	0.00824
865 01899	3.41800375	14.443533	14.41425	4123	4504.25	71.2	72.5	71.3	0.00824
870 01899	3.41035108	14.442893	14.4135	4126.75	4504.25	71.3	72.5	71.3	0.00824
875 01899	3.40510095	14.441391	14.41425	4127	4504.25	71.3	72.5	71.3	0.00834
880 01899	3.42353577	14.442135	14.4175	4124.75	4504.25	71.3	72.5	71.3	0.00824
885 01896	3.41597262	14.442135	14.415	4125.75	4504.25	71.4	72.5	71.3	0.00824
890 03	3.40972582	14.442135	14.415	4125.75	4504.25	71.5	72.5	71.3	0.00824
895 01901	3.4184795	14.44182	14.41425	4123.5	4504.25	71.5	72.5	71.3	0.00824
900 01901	3.40910355	14.443533	14.41425	4122.5	4504.25	71.5	72.5	71.3	0.00823

90% OF 15 min value

15.2 min value

7

Wht

Electronic

PASS

PASS

Environ. Toxicol. 2008; 29(1):100-105

TEST K53073-4_23 May 1987 NED-SPCOL												
SECONDS	MAIN DUCT DIFF IN (IN)	MAIN DUCT ABS (PSIA)	MAIN DUCT DIFF IN (IN)	GAS INJECT DIFF IN (IN)	WHITTAKER OUTPUT (PSIA)	DETRONICS PPM	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT DEL. (IN)	
0.0	0.0000	3.5072240	14.4336000	0.0000000	14.43000	98.423	71.4	72.0	71.2	71.3	0.000225	
5.0	0.0000	3.5076417	14.4386000	0.0000000	14.47500	98.575	71.5	72.2	71.2	71.3	0.000221	
10.0	0.0000	3.4403340	14.4406000	0.0000000	14.47650	97.178	71.3	72.1	71.3	71.2	0.000203	
15.0	0.0000	3.3933461	14.4386000	0.0000000	14.47675	134.175	71.4	72.1	71.4	71.4	0.000453	
20.0	0.0000	3.4097542	14.4381412	0.0000000	14.47575	238.2	71.4	72.2	71.3	71.4	0.000611	
25.0	0.0000	3.4174474	14.4380000	0.0000000	14.47575	320.975	71.5	72.2	71.3	71.3	0.000716	
30.0	0.0000	3.4246389	14.4380000	0.0000000	14.47575	397.6	71.4	72.1	71.4	71.3	0.000923	
35.0	0.0000	3.4246389	14.4381412	0.0000000	14.47600	448.1	71.5	72.2	71.4	71.3	0.000983	
40.0	0.0000	3.4264785	14.4380000	0.0000000	14.47650	480.8	71.5	72.1	71.3	71.2	0.000994	
45.0	0.0000	3.4083483	14.4386000	0.0000000	14.47575	507.1	71.5	72.2	71.2	71.3	0.000972	
50.0	0.0000	3.4115013	14.4406000	0.0000000	14.47575	523.3	71.5	72.2	71.3	71.4	0.000986	
55.0	0.0000	3.4185433	14.4406000	0.0000000	14.47575	536.3	71.5	72.2	71.3	71.3	0.001014	
60.0	0.0000	3.4341115	14.4406000	0.0000000	14.47575	549.5	71.5	72.2	71.3	71.4	0.001029	
65.0	0.0000	3.4176543	14.4380000	0.0000000	14.47575	534.3	71.5	72.2	71.3	71.3	0.001042	
70.0	0.0000	3.3815039	14.4379442	0.0000000	14.47575	585.5	71.5	72.2	71.3	71.3	0.001053	
75.0	0.0000	3.4037582	14.4380000	0.0000000	14.47575	588.7	71.5	72.2	71.4	71.3	0.001086	
80.0	0.0000	3.4053537	14.4406000	0.0000000	14.47575	570.25	71.5	72.2	71.3	71.2	0.001073	
85.0	0.0000	3.4040039	14.4406000	0.0000000	14.47425	577.5	71.5	72.2	71.3	71.3	0.001073	
90.0	0.0000	3.3981215	14.4406000	0.0000000	14.47425	590.3	71.5	72.2	71.3	71.4	0.001078	
95.0	0.0000	3.4035541	14.4380000	0.0000000	14.47575	584.6	71.5	72.2	71.3	71.3	0.001083	
100.0	0.0000	3.3903623	14.4379442	0.0000000	14.47575	598.0	71.5	72.2	71.3	71.4	0.001084	
105.0	0.0000	3.4115013	14.4380000	0.0000000	14.47575	581.25	71.5	72.2	71.3	71.3	0.001091	
110.0	0.0000	3.40712474	14.4381412	0.0000000	14.47575	597.25	71.5	72.2	71.3	71.3	0.001094	
115.0	0.0000	3.4038558	14.4406000	0.0000000	14.47575	594.75	71.5	72.2	71.3	71.3	0.001093	
120.0	0.0000	3.41973014	14.4406000	0.0000000	14.47575	598.3	71.5	72.2	71.4	71.4	0.001098	
125.0	0.0000	3.3906772	14.4380000	0.0000000	14.47575	590.75	71.5	72.2	71.4	71.5	0.001105	
130.0	0.0000	3.3903623	14.4406000	0.0000000	14.47425	599.3	71.5	72.2	71.5	71.5	0.001104	
135.0	0.0000	3.3973242	14.4380000	0.0000000	14.47425	597.25	71.5	72.2	71.4	71.4	0.001105	
140.0	0.0000	3.4093604	14.4380000	0.0000000	14.47575	603.5	71.5	72.2	71.4	71.3	0.001113	
145.0	0.0000	3.39221826	14.4406000	0.0000000	14.47575	596.75	71.5	72.2	71.4	71.5	0.001118	
150.0	0.0000	3.44286013	14.4413901	0.0000000	14.47575	829.4	71.6	72.5	71.4	71.4	0.001117	
155.0	0.0000	3.43672582	14.4413901	0.0000000	14.47575	858.5	71.8	72.5	71.4	71.3	0.001118	
160.0	0.0000	3.40265704	14.4413901	0.0000000	14.47575	848.25	71.8	72.5	71.4	71.4	0.001122	
165.0	0.0000	3.40265704	14.4413901	0.0000000	14.47575	837.5	71.8	72.5	71.4	71.4	0.001122	
170.0	0.0000	3.41721806	14.4406000	0.0000000	14.47575	849.25	71.7	72.5	71.4	71.4	0.001123	
180.0	0.0000	3.41756403	14.4406000	0.0000000	14.47575	849.25	71.8	72.5	71.3	71.3	0.001126	
185.0	0.0000	3.40567342	14.4399300	0.0000000	14.47575	849.25	71.7	72.5	71.4	71.3	0.001126	

Goodbye, Goodbye

SECONDS	MAIN DUCT DIFF IN (H2O ASS (PSIA)	MAIN DUCT DIFF IN (H2O ASS (PSIA)	GAS INJECT DIFF IN (H2O ASS (PSIA)	WHITTAKER OUTPUT (PPM)	DETRONICS PPM	AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL (VOLTS)
400.01909	3.41180163	3.41266433	2.73103052	5313	5933	72.8	73	71.7	72.2	0.001148
401.01909	3.40286785	3.41361427	2.73183006	5510.76	5538	72.8	73	71.7	72.4	0.00115
410.0191595	3.40910095	3.41376622	2.73182898	5314	6002.75	73.1	73	71.8	72.4	0.00118
415.0191856	3.40222233	3.41336939	2.73167086	14.475	5802.75	73.1	73	71.8	72.4	0.001181
420.0191898	3.410591636	3.41246959	2.73182898	6336.75	5502.75	73.1	73.1	71.8	72.4	0.001151
425.0191909	3.39221836	3.41498863	2.73182898	14.475	5802.75	73	73.1	71.8	72.4	0.001151
435.019186	3.40222369	3.41498924	2.73301708	14.475	5920.25	73	73	71.9	72.2	0.001150
435.019198	3.42348176	3.41348435	2.73301708	14.475	5930.25	73.1	73.1	71.9	72.2	0.001151
440.0191991	3.42785895	3.41376622	2.73182898	14.475	5930.25	73.1	73.1	71.8	72.3	0.00115
445.040281	3.39521826	3.41336939	2.73182898	14.475	5928.75	73.1	73.1	71.8	72.3	0.00115
445.019198	3.39841096	3.41348435	2.73182898	14.475	5902.75	73.1	73.1	72.2	72.3	0.00115
445.019198	3.39841096	3.41348435	2.73182898	14.475	5902.75	73.1	73.1	72.2	72.3	0.00115
450.019198	3.41660479	3.41336939	2.73103052	14.475	5902.75	73.1	73.1	72.2	72.3	0.00115
455.019198	3.39343444	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
470.019198	3.41285217	3.41336939	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
475.06	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
480.0191969	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
485.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
490.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
495.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
495.13	3.41222605	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
500.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
505.12	3.41311281	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
510.019198	3.41222605	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
515.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
520.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
525.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
530.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.00115
535.019198	3.39547066	3.41348435	2.73182898	14.475	5930.25	73.1	73.1	72.2	72.3	0.0011

TEST: #25712, 4-23 May 1997 WEC-SPOOL											
SEC#	MODE	MAIN DUCT DIFF IN ABS (PSIA)	MAIN DUCT ABS (PSIA)	GAS INJECT DIFF IN H2O	GAS INJECT ABS (PSIA)	WHITAKER OUTPUT (PSIA)	LETRONICS AMBIENT TEMP (F)	FLAMMABLE TEMP (F)	MAIN DUCT TEMP (F)	WHIT CELL TEMP (F)	WHIT CELL VOLTS
603	01906	3.44536405	14.437842	2.73339382	14.4725	6371.75	6837.5	74.3	72.4	72.2	5.001157
605	01909	3.42048624	14.435824	2.7322544	14.47725	6373.75	6835.5	74.4	73.5	73.7	5.001155
611	01903	3.41810487	14.433663	2.73355528	14.4745	6371.75	6832.5	74.3	72.5	72.3	5.001151
616	01906	3.42348176	14.438833	2.73355528	14.47425	6371.75	6832.5	74.3	72.6	72.8	5.001158
620	01909	3.38471934	14.4341531	2.73379768	14.47425	6372	6837.5	74.3	72.6	72.3	5.001157
625	01906	3.42765649	14.438465	2.73297984	14.47425	6371.25	6837.5	74.2	72.8	72.3	5.001158
633	01903	3.38471934	14.4341531	2.73355528	14.47425	6373.5	6837.5	74.3	72.5	72.3	5.001158
635	01909	3.38471934	14.4341531	2.73355528	14.4725	6375	6832.5	74.1	73.5	72.7	5.001157
640	01909	3.42348176	14.438833	2.73355528	14.4725	6375.5	6832.5	74.2	73.5	72.8	5.001156
647	01906	3.41786453	14.4353331	2.73355528	14.4725	6375.5	6832.5	74.2	73.5	72.8	5.001156
650	01909	3.42348176	14.438833	2.73355528	14.4725	6375.5	6832.5	74.2	73.5	72.8	5.001156
655	01903	3.38471934	14.4341531	2.73379768	14.4745	6380.25	6832.5	74.2	73.5	72.8	5.001157
660	01906	3.42765649	14.438465	2.73297984	14.4745	6380.25	6832.5	74.2	73.5	72.8	5.001157
665	01909	3.42765649	14.438465	2.73297984	14.4745	6380.25	6832.5	74.2	73.5	72.8	5.001157
670	01906	3.42765649	14.438465	2.73297984	14.4745	6380.25	6832.5	74.2	73.5	72.8	5.001157
675	01909	3.42765649	14.438465	2.73297984	14.4745	6380.25	6832.5	74.2	73.5	72.8	5.001157
680	01906	3.41937863	14.4366324	2.73479616	14.47425	6386	6832.5	74.6	73.7	72.8	5.001161
685	01909	3.42355546	14.4389316	2.73355528	14.47425	6385.25	6832.5	74.6	73.7	72.8	5.001156
690	01903	3.42355546	14.4389316	2.73355528	14.47425	6385.25	6832.5	74.6	73.7	72.8	5.001156
700	01906	3.42355546	14.4389316	2.73355528	14.47425	6385.25	6832.5	74.6	73.7	72.8	5.001156
705	01909	3.41937863	14.4366324	2.73479616	14.47425	6386	6832.5	74.6	73.7	72.8	5.001161
710	01906	3.40810056	14.4333633	2.73479616	14.47425	6386	6832.5	74.6	73.7	72.8	5.001161
715	01909	3.41968337	14.4366324	2.73297984	14.47425	6386.5	6832.5	74.6	73.7	72.8	5.001161
720	01906	3.41968337	14.4366324	2.73297984	14.47425	6386.5	6832.5	74.6	73.7	72.8	5.001161
725	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
730	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
735	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
740	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
745	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
750	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
755	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
760	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
765	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
770	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
775	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
780	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
785	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
790	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
795	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
800	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
805	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
810	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
815	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
820	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
825	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
830	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
835	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
840	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
845	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
850	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
855	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
860	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
865	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
870	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
875	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
880	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
885	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
890	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
895	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
900	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
905	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
910	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
915	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
920	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
925	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
930	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
935	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
940	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
945	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
950	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
955	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
960	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
965	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
970	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
975	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
980	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
985	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
990	01906	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161
995	01909	3.42731308	14.4366435	2.73252444	14.47515	6393	6832.5	74.5	73.7	72.8	5.001161

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DISTRIBUTION SHEET

To	From	Page 1 of 1
Distribution	K.S. Witwer	Date 6/25/97
Project Title/Work Order		EDT No. 601047
HNF-SO-WM-TRP-286, Rev. 0		ECN No. N/A
PCI SpoolPiece Hydrogen Sensor Response Test Report		

Name	MSIN	Text With All Attach.	Text Only	Attach./Appendix Only	EDT/ECN Only
J. D. Criddle	S7-12	X			
C. E. Hanson	S7-12		No App. G		
T. B. Jarecki	S7-03		No App. G		
A. J. Kusteinik	S7-12		No App. G		
G. A. Leshikar	S2-24		No App. G		
R. E. Raymond	S7-12		No App. G		
J. L. Smalley	S7-12		No App. G		
G. F. Vargo	H5-09		No App. G		
E. J. Waldo	S7-12	X			
K. S. Witwer (2)	16-13	X			
Central Files	A3-88	X			