

Address: 83 High

83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH.

Tele: +44 (0) 3300884720
Fax: +44 (0) 3300884721
info@orlandoaircon.co.uk

TIMESHE	ET RE	EPOR	Τ									
CUSTOMER NAME								SITE CONTAC	CT (OPERA	TOR RESPONSIBLE FOR F-	GAS COMPLIANCE)	SHEET NUMBER
A CUSTOMER									A NAME	-	A POSITION	00000
SITE NAME & ADDRES	S (PLANT OV	WNER F-GAS)					ENGINEER		STEVE ORLANDO		CLIENT ASSET NUMBER
AN ADDRESS, A TO	WN, A COL	JNTY, A CO	UNTRY. AB	80 0AB				MATE		A MATE		00000
REASON FOR VISIT	A VISIT							MANUFACTUI	RER	A MANUFACTURER	MODEL	A MODEL NUMBER
JOB NUMBER	А ЈОВ							SERIAL No.		A SERIAL NUMBER	YEAR INSTALLED	01/01/1980
PLANT LOCATION	A LOCATI	ON						REFRIGERAN	T TYPE	R22	TOTAL REF. CHARGE	240.0 KG
PLANT REFERENCE	A PLANT F	REFERENCE						REFRIGERAN	T GWP	1810	IND. REF SYS. CHARGE	60+60+60+G
CLG LOAD SERVED	A COOLIN	IG LOAD SE	RVED					EQUIV. TONN	IES CO2e	434.4	F-GAS LEAK CHECK FREQ.	HALF YEARLY
WORK CARRIED OUT:								L				
DAY DATE MON	START	FINISH	TRAVEL	TOTAL	COMPLETE Y/N	MILEAGE	No. ENG	QUANTITY	DESCRIP	TION	MATERIALS USED	
TUES												
WED												
THUR												
FRI												
SAT												
SUN CUSTOMER TO SI	GN FOR ENGIN	EERS TIME ON	SITE									
ENGINEER SIGNATURE:								CUSTOMERS	SIGNATURE	<u>:</u>		
F-GAS QUALIFICATION:			C&G 2	079 PART	1		_	CUST	OMER NAME	=:	A NAME	
SIGNATURE DATE:			00/	01/1900			_	CUSTOMER	RS JOB TITLE	=:	A POSITION	
ADDITIONAL WORKS R	ECOMMENDEI	D / REQUIRED	D:									
ISO9001:2008. CUSTOI	1ER SATISFA	CTION:					1 = UNSATI:	SFIED 2 = B	ELOW AVE	RAGE 3= MET EXPECTAT	TON 4 = ABOVE AVERAGE 5 = EXCEL	LENT
CUSTOMER COMMENTS	ABOUT PERF	ORMANCE ON	THIS JOB /	CONTRACT:								



Address: 83 High Street,
Hemel Hempstead,
Hertfordshire, HP1 3AH.

Tele: +44 (0) 3300884720
Fax: +44 (0) 3300884721
info@orlandoaircon.co.uk

F-GAS & BOTTLE LOG

F-GAS	& B(OTTLI	E LOG										
CUSTOMER NAME	Ē						SITE CONTACT (OPE	RATOR RES	PONSIBLE	FOR F-GAS COMPLIA	NCE)	SHEET NU	MBER
ACL ENGINE	ERING LTC)					A NAME - A PO			A POSITION	A POSITION 0000		
SITE NAME & ADI	DRESS (PLANT	Γ OWNER F-GAS	S)				ENGINEER STEV		STEVE	STEVE ORLANDO			SSET NUMBER
CRN LTD, BA	NK HOUSE	E, PRIMOTT	RD, STEVENAGE.	SG1 3EE			QUALIFICATION C8		C&G 2079 PART 1				00000
MANUFACTURER		MODEL		SERIAL	DATE IN	NSTALLED	PLANT REFERENCE						
A MANUFACT	URER	A MODEL N	NUMBER	A SERIAL NUMBE	ER 01/01	L/1980	A PLANT REFER	RENCE					
REFRIG TYPE	TOT. REFRIG	CHRG.	INDIVIDUAL SYS. REF.	CHARGE	REFRIG GWP	EQUIV. TONNES CO2e	F-GAS LEAK CHECK I	FREQ.	CLG LOA	D SERVED			
R22	240.0 KG		60+60+60+60 KG	.G	1810	434.4	HALF YEARLY		A COO	LING LOAD SER	VED		
			1		VIRGIN	REFRIGERAN	T BOTTLE	LOG (KG)				
DATE RECEIVED	DELIVERY N	IOTE NUMBER	BOTTLE NUMBER	SUPPLIER	REFRIGERANT	BOTTLE TYPE	GROSS WEIGHT	TARE W		NET WEIGHT	NET USED	DATE RETURNED	RETURNS NOTE NUMBER
				-	-								
				-	-								
					RE	COVERY BOT	TLE LOG (KG)					
DATE RECEIVED	DELIVERY N	IOTE NUMBER	BOTTLE NUMBER	SUPPLIER	REFRIGERANT	RECOVERY TYPE	TARE WEIGHT	RECOVER	RED NET	RECOVERED USED	GROSS WEIGHT	DATE RETURNED	WASTE TRANSFER NOTE
					F-GAS	REFRIGERAT	TON LOG F	 ≥FCOR	ח				
REFRIGERAN'	T ADDITIO	NS			• • •			\					
DATE	170	ENGINEER	AMOL	UNT ADDED (KG)					DEASON	I FOR ADDITION			
DATE		LINGINEER	711.00	NI ADDED (NO)	ALAGON FOR ADDITION								
	<u> </u>												
REFRIGERAN	T REMOVAI	LS											
DATE		ENGINEER	AMOUN	NT REMOVED (KG)					REASO	N FOR REMOVAL			
REFRIGERAN	REFRIGERANT LEAK TEST												
DATE		ENGINEER	Т	TEST RESULT				FO	LLOW UP	ACTIONS REQUIRED			
00/01/1900	STE	VE ORLANI	00	PASS						PPM -			
-													
FOLLOW UP ACT	TIONS												
		ENGINEED	DEI AT	TED TO TECT ON					۸СТ	TONO TAKEN			
DATE 		ENGINEER	KLLAI	TED TO TEST ON					ACT	IONS TAKEN			
TESTING AUT	OMATIC LE	EAK DETECT	TION SYSTEM (IF F	ITTED)									
DATE		ENGINEER	T	TEST RESULT					C	OMMENTS			



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720 Fax: +44 (0) 3300884721 info@orlandoaircon.co.uk

SYSTEM TEST CERTIFICATES

CUSTOMER NAME	SITE CONTACT (OPERATOR RE	SHEET NUMBER		
ACL ENGINEERING LTD	A NAME	-	A POSITION	00000
SITE NAME & ADDRESS	ENGINEER	STEVE ORLANDO		CLIENT ASSET NUMBER
CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE	F-GAS QUALIFICATION	C&G 2079 PART 1		00000
REASON FOR VISIT A VISIT	MANUFACTURER	A MANUFACTURER	MODEL	A MODEL NUMBER
JOB NUMBER A JOB	SERIAL No.	A SERIAL NUMBER	YEAR INSTALLED	01/01/1980
PLANT LOCATION A LOCATION	REFRIGERANT TYPE	R22	QUANTITY (KG)	240.0 KG
PLANT REFERENCE A PLANT REFERENCE	CLG LOAD SERVED	A COOLING LOAD SERVED		

LANT LOCATION	A LOCATION		REFRIGERANT TYPE R22		QUANTITY (KG)	240.0 KG
LANT REFERENCE	A PLANT REFERENCE		CLG LOAD SERVED A COOLING LOAD S	SERVED		
		STRENGT	TH TEST CERTIF	FICATE		
START (OF STRENGTH TEST					
D <i>A</i>	ATE	TIME	PRESSURE	MOP		
THE AF	BOVE SYSTEM / COMI	PONENT HAD A WITNES	SED OFN NITROGEN STRENGT	H TEST APPLIE	D AT 1 5 TIMES	S MOP (MAXIMUM
	SOVE STOTELLY COLL		SSURE), MAINTAINED FOR 30		J / (1 113 111 120	
		INSTRUMENT (JSED: ITE HIGH SIDE GAUGE. CALABRATED: 25/11	l/2014.		
		INSTRUMENT SERIAL:	FTEK-147. CERTIFICATE No. CM248650. NEXT DU	UE 25/11/2015.		
	ENGINEERS SIGNATURE		CUSTOMERS SIGNATURE			
	F-GAS QUALIFICATION	C&G 2079 PART 1	PRINT NAME		A NAME	
	SIGNATURE DATE	00/01/1900	CUSTOMERS JOB TITLE		A POSITION	
		DDFCCIIC	RE TEST CERTIF			
START (OF PRESSURE TEST	INLUSUR	<u>IL ILJI CLIVIII</u>	ICAIL		
		TIME	DDECCLIDE	AMDIENT		
	PRESSURE TEST	I IIVIC	PRESSURE	AMDICNI		
Da	ATE	TIME	PRESSURE	AMBIENT		
TEMPER	RATURE COMPENSATED NITR	ROGEN PRESSURE FIGURE				
CALCULAT	TED CORRECTED END PRESSURE US	SING START PRESSURE AND START AMBI	ENT TEMPERATURE RELATIVE WITH FINISH AMBIE	NT TEMP.		
THE ABOV	E SYSTEM HAD A WIT	TNESSED OFN NITROGE	N PRESSURE TEST APPLIED, W	/HICH WAS MA	INTAINED FOR	THE PERIOD STATE
		ABOVE AND HA	S BEEN PROVED TO REMAIN L	EAK TIGHT		
		INSTRUMENT USED: C	PS PROSET HIGH SIDE GAUGE. CALABRATE	D: 25/11/2014.		
		INSTRUMENT SERIAL: FTE	K-045. CERTIFICATE No. CM248649. NEX	T DUE 25/11/2015.		
	ENCINEEDS SIGNATURE		CUCTOMEDO CICNATUDE			
	F-GAS QUALIFICATION	C&G 2079 PART 1	CUSTOMERS SIGNATURE PRINT NAME		A NAME	
		00/01/1900	CUSTOMERS JOB TITLE		A POSITION	
	SIGNATURE DATE	00/01/1900	CUSTOMERS JOB TITEL		A POSITION	
		VACIIIIN	1 TEST CERTIFI	CATE		
START (OF VACUUM TEST	VICOUI				
		TINAF	1/4	A CLULINA		
	VACUUM TEST	TIME		ACUUM		<u> </u>
DA	ATE	TIME	VA	ACUUM		
THE ABOV	VE SYSTEM HAD A W.		LED DOWN TO 4 mBar AND MA AN A 1.0 mBar RISE IN PRESS		(A PERIOD OF	2 HOURS WITHOUT
			D: KENT/MOORE. 040362/25 CALABRATED: 3			
			TEK-043. CERTIFICATE No. FT0043I. NEXT [
	ENGINEERS SIGNATURE		CUSTOMERS SIGNATURE			

F-GAS QUALIFICATION C&G 2079 PART 1 PRINT NAME A NAME

SIGNATURE DATE 00/01/1900 CUSTOMERS JOB TITLE A POSITION



Address: 83 High Street, Hemel Hempstead,

Tele: +44 (0) 3300884720 +44 (0) 3300884721 Fax: Hertfordshire, HP1 3AH. info@orlandoaircon.co.uk

PPM REPORT - RECIP. CHILLERS SITE CONTACT (OPERATOR RESPONSIBLE FOR F-GAS COMPLIANCE) **CUSTOMER NAME** SHEET NUMBER 00000 ACL ENGINEERING LTD A POSITION A NAME STEVE ORLANDO CLIENT ASSET NUMBER SITE NAME & ADDRESS **ENGINEER** 00000 CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE F-GAS QUALIFICATION C&G 2079 PART 1 REASON FOR VISIA VISIT A MODEL NUMBER A MANUFACTURER MODEL MANUFACTURER A JOB SERIAL No. A SERIAL NUMBER YEAR INSTALLED 01/01/1980 JOB NUMBER R22 PLANT LOCATION A LOCATION 240.0 KG REFRIGERANT TYPE QUANTITY (KG) PLANT REFERENCE A PLANT REFERENCE CLG LOAD SERVED A COOLING LOAD SERVED COMPRESSOR MANUFACTURER: 2 OFF 7.5 L COMPRESSOR OIL TYPE: EAL ARTIC 22CC COPELAND OIL VOLUME: HRS RUN: N/A 991 71640 N/A D8DJ/6000/DWM/D **COMPRESSOR 1 MODEL:** SERIAL: STARTS: HRS RUN: N/A 991 71674 N/A D8DJ/6000/DWM/D **COMPRESSOR 2 MODEL:** SERIAL: STARTS: HRS RUN: N/A N/A N/A N/A STARTS: **COMPRESSOR 3 MODEL:** SERIAL: N/A N/A N/A HRS RUN: N/A **COMPRESSOR 4 MODEL:** SERIAL: STARTS: F FAIR P POOR B BAD N/A NOT APPLICABLE **BOX CODES** Y YES NO G GOOD N COMPRESSOR Min/Maj CONTROL PANELS Min/Maj F-GAS REFRIGERANT CHECKS Min/Maj Check Oil Level Standard Check Refrigerant Charge G Micro GG 25.0 BarG H.P Cut-Out Check Oil Heater Operation N/A Carry Out Leak Test with Electronic Leak Detector GG L.P Cut-Out GG **Check Compressor Pumping** 2.5 BarG Leaks Found / Repaired N/A GG Pump Down Test Pumpdown C/O Check Pressure Relief Valves N/A N/A Condition of Oil (One Shot Test) 0.7 BarD N/A Oil Press C/O Check Pressure Relief Valve Vent Line COMPRESSOR Maj 3.0 Deg C LTL Cut-Out 01/06/2013 PRV's Five (5) Year Anniversary N/A Check Big Ends 25.2 BarG Actual H.P Cut-Out Pressure N/A Check Fixed Leak Detection System Check Sump for Metal Test Chilled Water Flow Switch Are There Health & Safety Risks Oil Sample Taken (Lab Test) N/A Test Condenser Water Flow Switch 12.0 Deg C Temp Control S.P 1 OPERATION CHECKS Min/Maj Swab Sump 1.5 Deg C Temp Control D.B/Range 1 Suction Valves & Springs Comp #3 Comp #1 Comp #2 Comp #4 Temp Control S.P 2 Evap Pressure N/A Discharge Valve & Springs Cond Pressure Temp Control D.B/Range 2 Check Cylinder Sleeves 1.0 Deg C **Check Suction Strainer** -4.0 Deg C Low Ambient Temp C/O Oil Pressure High Ambient Temp C/O Check Oil Strainer 45.0 Deg C Chld Water ON Condenser Fan S.P. 14.0 BarG Check Unloader Operation Chld Water OFF AIR CONDENSERS Min/Maj N/A 2.0 BarG Condenser Fan Range Cond Water ON Condition of Coils G N/A Cond Water OFF **Inverter Condition** Check Fans N/A High Pressure Force Unload G Ambient AIR CONDENSERS Maj UNIT CONDITION Min/Maj Compressor Amps Condenser Coils Brushed Check Panels Compressor Load Oil Temp Condenser Chemical Cleaned Check Paintwork S & TUBE CONDENSERS Maj **EEV STEP** Check Insulation Remove End Covers Check Pipework **OPERATION CHECKS Maj** N/A Condition of Tubes Check Solenoid Valves N/A System #1 System #2 System #3 System #4 Condition of Water Boxes N/A Sight Glass Cond 10.1 T-Sat C Evap Tsat (Dew) N/A DRY Check for Water Leaks N/A Sight Glass Cond Suction Temp N/A N/A Check Water Valve Operation Check Vibration Isolators -10.1 Deg K 0.0 Deg K 0.0 Deg K 0.0 Deg K Suct Superheat NO BINDERS Evaporator Water Box P.D CONTROL PANELS Min/Maj Cond Tsat (Bubble) 38.8 T-Sat C Check Main Wiring Discharge Temp N/A Condenser Water Box P.D CALIBRATION CHECKS Min/Maj Check Main Controller Disch Superheat -38.8 Deg K 0.0 Deg K 0.0 Deg K 0.0 Deg K Check Oil Temp Sensor/s Door Seals, Hinges & Latches Liquid Line Temp G 0.0 Deg K 0.0 Deg K Load / Unload of Compressor Check Ambient Sensor 38.8 Deg K 0.0 Deg K Subcooling MOTOR CHECKS Maj Check Compressor Contactors Check Chilled Water Sensor/s GG System #1 Check & Tighten Connection Check Condenser Water Sensor/s System #3 System #2 System #4 Check EEV Control N/A Check Fan O/L G N/A G G Compressors N/A **Check Timer Sequences** N/A N/A Control ELCB Test G Check S1 Sensor N/A Check S2 Sensor G N/A N/A N/A Cond Fans 1-4 Check Electrical Connections Cond Fans 5-8 Check LP Transducers 240 V L1 Phase Volts to Earth N/A N/A N/A N/A Check HP Transducers Chiller Print-Out Taken 233 V L2 Phase Volts to Earth 233 V L3 Phase Volts to Earth Check OP Transducers **IS FURTHER WORK NEEDED. (Identify Below)** NO FAULTS TO REPORT

ENGINEER SIGNATURE: CUSTOMERS SIGNATURE: DATE: 00/01/1900



Address: 83 High Street, Hemel Hempstead,

Hertfordshire, HP1 3AH.

Tele: +44 (0) 3300884720
Fax: +44 (0) 3300884721
info@orlandoaircon.co.uk

PPM REPORT - ENERGYPA	K CHILLER			•		
CUSTOMER NAME		SITE CONTACT (OPERAT	TOR RESPONSIBLE FOR	F-GAS COMPLIAN	ICE)	SHEET NUMBER
ACL ENGINEERING LTD		A NAME		A POSITION		00000
SITE NAME & ADDRESS		ENGINEER	STEVE ORLANDO	71100111011		CLIENT ASSET NUMBER
CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. S	SG1 3FF	F-GAS QUALIFICATION				00000
REASON FOR VISIT A VISIT	OI JEE	MANUFACTURER	A MANUFACTURER		MODEL	A MODEL NUMBER
JOB NUMBER A JOB		SERIAL No.	A SERIAL NUMBER		YEAR INSTALLED	01/01/1980
PLANT DEFENSE A PLANT DEFENSE		REFRIGERANT TYPE	R22	EDVED	QUANTITY (KG)	240.0 KG
PLANT REFERENCE A PLANT REFERENCE		CLG LOAD SERVED	A COOLING LOAD SI	EKVED	OTL VOLUME.	101
COMPRESSOR MANUFACTURER: YORK	COMPRESSOR OIL	TM410851		NO METERS FI	OIL VOLUME:	10L NO METER
COMPRESSOR 1 MODEL: JS63E-P5046L	SERIAL:	The same and the s	T Tanana		v gri - pariosat	STARTS: NO METER
BOX CODES Y YES N NO	G GOOD F FAIR	P POOR	B BAD N/	TE CE		
COMPRESSOR Min/Maj	CONTROL PANELS Min/Ma	aj			CHECKS Min/N	Мај
G Check Oil Level	Standard Micro	1		efrigerant Charg		
G Check Oil Heater Operation	24.8 BarG N/A	H.P Cut-Out		essure Relief Va		
G Check Compressor Pumping C Dump Down Took	2.4 BarG N/A	L.P Cut-Out		essure Relief Va		
G Pump Down Test Condition of Oil (One Shot Test)	2.4 BarG N/A	Pumpdown C/O		xed Leak Detect	,	tandard
G Condition of Oil (One Shot Test) G Hours Run Inspection Required	1.7 BarD N/A 2.2 Deg C N/A	Oil Press C/O LTL Cut-Out	 	e Health & Safe	n to BS EN 378 St tv Dicks	.anuaru
G Hours Run Inspection Required COMPRESSOR Maj	25.1 BarG Actual H.P Cut-O	1	Are There	e Health & Sale	LY KISKS	
N/A Check Big Ends	G Test Chilled Water Flow Swi		OPERATION	CHECKS M	in/Mai	
N/A Check Sump for Metal	G Test Condenser Water Flow			HEATING	HEAT REC	
N/A Oil Sample Taken (Lab Test)	65.0 Deg C N/A	HLLT	4.2 BarG	3.5 BarG	4.2 BarG	Evaporator Pressure
N/A Swab Sump	59.0 Deg C N/A	HLPS	16.8 BarG	34.1 BarG	22.5 BarG	Condenser Pressure
N/A Suction Valves & Springs	4.0 Deg C N/A	LALT	3.1 BarG	2.9 BarD	3.1 BarG	Oil Pressure
N/A Discharge Valve & Springs	22.0 Deg C N/A	HPST	8.6 Deg C	N/A	8.9 Deg C	Chilled Water ON
N/A Check Cylinder Sleeves	5.0 Deg C N/A	СТН	5.2 Deg C	N/A	6.4 Deg C	Chilled Water OFF
N/A Check Suction Strainer	53.0 Deg C N/A	HTH	N/A	46.7 Deg C	48.7 Deg C	Condenser Water ON
N/A Check Oil Strainer	110.0 Deg C N/A	HLST	N/A	49.5 Deg C	51.9 Deg C	Condenser Water OFF
N/A Check Unloader Operation	N/A Chiller Print-Out Taken		18.5 Deg C	18.5 Deg C	N/A	Air On
			21.8 Deg C	7.9 Deg C	N/A	Air Off
AIR CONDENSERS Min/Maj	UNIT CONDITION Min/Mag	j	17.8 Deg C	17.5 Deg C	18.1 Deg C	Ambient
1 P Condition of Coils	F Check Panels		67.0 Amps	85.9 Amps	68.0 Amps	Compressor Amps
G Check Fans	F Check Paintwork		43.7 Deg C	43.9 Deg C	44.6 Deg C	Oil Temperature
AIR CONDENSERS Maj	F Check Insulation		33%	66%	33%	Compressor Loading
Y Condenser Coils Brushed	F Check Pipework		OPERATION			
N Condenser Chemical Cleaned	G Check Solenoid Valves	C'AL CLASS CAST		HEATING	HEAT REC	
S & TUBE COND Maj	G N/A	Sight Glass Cond	N/A	N/A	N/A	Evaporator Tsat
G Check Water Leaks Check Water Valve Operation	N/A N/A E Chack Vibration Isolators	Sight Glass Cond	N/A	N/A	N/A	Suction Temperature
G Check Water Valve Operation G Check Water Diff	F Check Vibration Isolators		N/A	N/A	N/A	Suction Superheat Condonsor Test
G Check Water Diff	N/A Check Oil Sensors G Check Ambient Sensor		N/A N/A	N/A N/A	N/A N/A	Condenser Tsat Discharge Temperature
CONTROL PANELS Min/Maj	G Check Chilled Water Sensor	/s	N/A	N/A	N/A N/A	Discharge Superheat
F Check Main Wiring	G Check Condenser Water Serisor,		N/A	N/A	N/A	Liquid Line Temperature
G Check Main Controller	G Check Defrost Control		N/A	N/A	N/A	liquid Subcooling
F Door Seals, Hinges & Latches	N/A Check S1 Sensor		MOTOR CHE	•	, , ,	,
G Load / Unload of Compressor	N/A Check S2 Sensor		Earth Leakage To	3		
F Check Compressor Contactors	N/A Check LP Transducers			Fan #1	N/A	Fan #2
Y Check & Tighten Connection	N/A Check HP Transducers		-	Fan #3	N/A	Fan #4
G Check Fan O/L	N/A Check OP Transducers		N/A	Compressor		
G Check Timer Sequences	180 -140 = 40KPaD	Evaporator P.D				
G Check Electrical Connections	180 - 160 = 20KPaD	Condenser P.D	N IS FURT	HER WORK NI	EDED. (Identify	Below)
FAULTS FOUND:						
TAGETS TOORD.						



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720 Fax: +44 (0) 3300884721 info@orlandoaircon.co.uk

PPM REPORT - SCREW CHILLERS

PPM REPURI - S	CREW CI	TILLER.	<u> </u>	1						1		
CUSTOMER NAME				SITE CONTACT (OPER	ATOR	RESPON	SIBLE FO	R F-GAS COMPLIA	ANCE)	SHEET NUMBER		
ACL ENGINEERING LTD				A NAME			-	A POS	SITION			0000
SITE NAME & ADDRESS				ENGINEER	STE	EVE ORL	ANDO			CLIENT ASSET N	IUMBER	
CRN LTD, BANK HOUSE, PRIMOT	T RD, STEVENAGE.	SG1 3EE		F-GAS QUALIFICATIO	NC&C	G 2079 I	PART 1					00000
REASON FOR VISIT A VISIT				MANUFACTURER	ΑМ	1ANUFAC	CTURER		MODEL	A MODEL NUM	BER	
JOB NUMBER A JOB				SERIAL No.	A S	ERIAL N	IUMBER		YEAR INSTALLED	01/01/1980		
PLANT LOCATION A LOCATION				REFRIGERANT TYPE	R22	2			QUANTITY (KG)	240.0 KG		
PLANT REFERENCE A PLANT REF	ERENCE			CLG LOAD SERVED	A C	COOLING	LOAD S	ERVED	, ,			
COMPRESSOR MANUFACTURER:	DAIKIN		COMPRESSOR OIL T							OIL VOLUME:	2 OFF 20L	
COMPRESSOR 1 MODEL:	EZHC9WSGYE		SERIAL:	7311020			HRS RIIN:	20020 (80H △	PPM)	STARTS:	NOT MONI	
COMPRESSOR 2 MODEL:	EZHC9WSGYE		SERIAL:	7311020				19138 (0H △ F	•	STARTS:	NOT MONI	
								•				TORLD
COMPRESSOR 3 MODEL:	N/A		SERIAL:	N/A			HRS RUN:	•		STARTS:	N/A	
COMPRESSOR 4 MODEL:	N/A	Tue [SERIAL:	N/A			HRS RUN:		T	STARTS:	N/A	
BOX CODES Y	YES N	NO G	GOOD F	FAIR P	POC	DR .	ВВВ	AD N/A	NOT APPLICAE	BLE		
COMPRESSOR Min/Maj			PANELS Min/	•					CHECKS Min	/Maj		
GG Check Oil Level			Compressor Conta					efrigerant Charg				
GG Check Oil Heater Operation			& Tighten Connect	tion			•		h Electronic Leal	k Detector		
GG Check Compressor Pumpi	ing		Fan O/L					und / Repaired				
GG Pump Down Test GG Check Unloader Operation	2		Timer Sequences Electrical Connecti	ions				essure Relief V				
GG Check Unloader Operation *1 YY 20K Hours Inspection Rec			Cond Fan Voltage					essure Relief Va	aive vent Line Year Anniversar	V		
COMPRESSOR Maj	quireu	Standard	Micro	regulator				xed Leak Detec		,		
Replace Internal Oil Filter	-	25.5 BarG	25.0 BarG	H.P Cut-Out				e Health & Safe	-			
OIL SEPARATOR Min/M	aj	1.5 BarG	3.0 BarG	L.P Cut-Out	'			CHECKS M	•			
NN Oil Sample Test (One Sho	ot)	N/A	N/A	Pumpdown C/O		System	Α	System B	System #3	System #4		
N/A Oil Separator Level		N/A	5.0 BarD	Oil Press C/O		184.1	. KPaG	N/A	N/A	N/A	Evap Press	sure
N/A Check Heater Operation		N/A	3.0 Deg 0	LTL Cut-Out		547.5	KPaG	N/A	N/A	N/A	Cond Press	sure
OIL SEPARATOR Maj			Actual H.P Cut-Ou	ıt Pressure			KPaD	N/A	N/A	N/A	Oil Differe	
Oil Sample Taken (Lab Te	,		low Switches			24.8	KPaD	N/A	N/A	N/A	Oil Filter D	
Replace External Oil Filte	r		Temp Control S.P					DegC		N/A	Chid Wate	
ECONOMISER Min/Maj		1.0 Deg C -5.0 Deg C	Temp Control D.B Low Ambient Tem				15.3	DegC DegC		N/A N/A	Chld Wate Cond Wate	
N/A Check TX Valve Operation	n		High Ambient Ten	•				DegC DegC		√A √A	Cond Wate	
N/A Check Solenoid Operation		14.0 BarG	Condenser Fan S.	•					DegC	-,	Ambient	
N/A Check Liquid Level Contro	ol	6.0 BarG	Condenser Fan Ra	ange		152.0	Amps	N/A	N/A	N/A	Compresso	or Amps
		21.5 BarG	High Pressure For	ce Unload		21.8	DegC	N/A	N/A	N/A	Oil Temp	
LIQUID INJECTION Min/	'Ма <u>ј</u>	UNIT CON	IDITION Min/N	⁄laj		N	/A	N/A	N/A	N/A	EconTemp	Diff.
GG Check Injection Valve Op	eration	G Check	Panels, Paintwork	& AV Mounts		N	/A	N/A	N/A	N/A	EEV Position	on
			Pipework & Insular	tion			.0%	N/A	N/A	N/A	Slide Valve	e Position
AIR CONDENSERS Min/	′Мај		Solenoid Valves	F \				CHECKS M	J	Cychana #4		
GG Condition of Coils GG Check Fans			Motorised Shut-oft Seals, Hinges & Lat			System	#1 C Tsat	System #2	System #3 N/A	System #4 N/A	Evap Tsat	
AIR CONDENSERS Maj		DRY	DRY	Site Glass Cond.			Deg C		N/A	N/A	Suction Te	
Condenser Coils Brushed		40.0 KPaD	Evaporator Water				Deg K	0.0 Deg K	N/A	N/A	Suct Supe	•
Condenser Chemical Clea	ned	N/A	Condenser Water				C Tsat	old begin	N/A	N/A	Cond Tsat	
S & T CONDENSERS Ma			Glycol CW / Cond				Deg C		N/A	N/A	Discharge	
N/A Remove End Covers	,		CALIBRATION				Deg K	0.0 Deg K	N/A	N/A	Disch Supe	-
N/A Condition of Tubes			Ambient Sensor	, 3		23.8	Deg C		N/A	N/A	Liquid Line	e Temp
N/A Condition of Water Boxes	;	GG Check	Chilled Water Sens	sor/s		0.3	Deg K	0.0 Deg K	N/A	N/A	Subcooling	9
N/A Check for Water Leaks		N/A Check	Condenser Water	Sensor/s			/A	N/A	N/A	N/A	Winding Th	hermistor
		-	Oil Temperature S					CKS Maj				
CONTROL PANELS Min/I	Мај	-	EEV S1 / S2 Senso	ors		System		System #2	System #3	System #4	¬	
G Check Main Wiring			L.P Transducer/s			(<u>G</u>	G	N/A	N/A	Comp. Wir	_
B Check Main Controller	ah o c		H.P Transducer/s	educar/s							Cond Fans	
G Door Seals, Hinges & Late G Load / Unload of Compre		-	Oil Pressure Trans Side Load Pressure	,							Cond Fans Cond Fans	
Y Chiller Print-Out Taken	JJU1	-	Safety Flow Switch	•		N :	IS FURT	HER WORK N	EEDED. (Identi	ify Below)		, , <u>1</u>
		- Circuit		, - , = .			UNI		(, ,		
FAULTS FOUND:												
* NO FAULTS TO REPORT												

ENGINEER SIGNATURE: _____ DATE: _____ DATE: _____ DATE: _____



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720 Fax: +44 (0) 3300884721 info@orlandoaircon.co.uk

Hertfordshire, HP1 3AH. PPM REPORT - INVERTER SCREW CHILLERS **CUSTOMER NAME** SITE CONTACT (OPERATOR RESPONSIBLE FOR F-GAS COMPLIANCE) SHEET NUMBER 00000 ACL ENGINEERING LTD A NAME A POSITION STEVE ORLANDO SITE NAME & ADDRESS **ENGINEER** CLIENT ASSET NUMBER 00000 CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE F-GAS QUALIFICATION C&G 2079 PART 1 REASON FOR VISIT A VISIT A MANUFACTURER **MODEL** A MODEL NUMBER MANUFACTURER A JOB A SERIAL NUMBER YEAR INSTALLED 01/01/1980 JOB NUMBER SERIAL No. A LOCATION REFRIGERANT TYPE R22 240.0 KG QUANTITY (KG) PLANT LOCATION A PLANT REFERENCE A COOLING LOAD SERVED PLANT REFERENCE CLG LOAD SERVED **CARRIER SW220** CARRIER (ThermaCom) COMPRESSOR OIL TYPE: OIL VOLUME: 40 LTR + 20 LTR **COMPRESSOR MANUFACTURER:** HRS RUN: 18567 06NA2300S5N-A00 TZ681649 (REBUILD) 45315 COMPRESSOR 1 MODEL: SERIAL: STARTS: HRS RUN: 18051 TZ6801423 (REBUILD) **COMPRESSOR 2 MODEL:** 06NA2300S5NA-A00 SERIAL: STARTS: 45366 06NA2300S5NC-A00 TZ6801648 (REBUILD) HRS RUN: 18748 48288 **COMPRESSOR 3 MODEL:** SERIAL: STARTS: N/A N/A HRS RUN: N/A N/A SERIAL: STARTS: **COMPRESSOR 4 MODEL:** GOOD POOR B BAD YES NO FAIR NOT APPLICABLE BOX CODES N G COMPRESSOR Min/Maj CONTROL PANELS Min/Maj F-GAS REFRIGERANT CHECKS Min/Maj GGG Check Compressor Contactors Check Oil Level GGG Check Refrigerant Charge Check & Tighten Connection GGG Carry Out Leak Test with Electronic Leak Detector Check Oil Heater Operation Check Compressor Pumping N/N Leaks Found / Repaired Check Fan O/L GGG GG GGG Check Pressure Relief Valves GGG Pump Down Test Check Timer Sequences G GGG Check Pressure Relief Valve Vent Line 20K Hours Inspection Required Check Electrical Connections В **COMPRESSOR Maj** 01/06/2014 PRV's Five (5) Year Anniversary Check Compressor Soft Starters N/A Check Fixed Leak Detection System Replace Internal Oil Filter Standard Micro Are There Health & Safety Risks H.P Cut-Out 21.8 BarG 21.0 BarG OPERATION CHECKS Min/Maj OIL SEPARATOR Min/Maj N/A 0.5 BarG L.P Cut-Out Oil Sample Test (One Shot) N/A 0.5 BarG Pumpdown C/O System #1 System #2 System #3 System #4 Oil Press C/O 2.12 BarG Evap Pressure Oil Separator Level DP-OP>540KPaG: 6 SEC 2.81 BarG 2.15 BarG N/A Check Heater Operation 2.1 Deg C LTL Cut-Out 2.8 BarG Cond Pressure 8.6 BarG 8.8 BarG N/A N/A OIL SEPARATOR Maj UNTESTED Actual H.P Cut-Out Pressure 2.8 BarG 7.7 BarG 7.7 BarG N/A Oil Pressure Oil Sample Taken (Lab Test) Test Flow Switches *4 8.2 Deg C N/A Chld Water ON 6.0 Deg C Temp Control S.P 5.1 Deg C Replace External Oil Filter N/A Chld Water OFF N/A N/A Cond Water ON 1.0 Deg C Temp Control D.B/Range ECONOMISER Min/Maj -18.0 Deg C Low Ambient Temp C/O N/A N/A Cond Water OFF 45.0 Deg C High Ambient Temp C/O 16.2 Deg C N/A Check FEED Valve Operation Ambient Check Solenoid Operation 196.0 BarG 14.0 BarG Condenser Fan S.P 0.0 Amps 184.0 Amps N/A Compressor Amps N/A Check Liquid Level Control 38.5 Deg C 6.0 BarG Condenser Fan Range 28.8 Deg C 35.2 BarG N/A Oil Temp N/A Check DRAIN Valve Operation High Pressure Force Unload OFF ON ON N/A EconTemp Pressure 18.0 BarG Feed Valve Position 0.0% 88.1% 71.3% N/A LIQUID INJECT Min/Maj UNIT CONDITION Min/Maj 0.3% 5.8% 14.5% N/A Economiser Level GGG Check Injection Valve Operation Check Panels & Paintwork 0.0% 50.0% 51.8% N/A Drain Valve Position 85.2% 0.0% Check Insulation 100.0% N/A G Compressor Loading *1 AIR CONDENSERS Min/Maj **OPERATION CHECKS Maj** Check Pipework G Condition of Coils Check Solenoid Valves System #1 System #2 System #3 System #4 Sight Glass Cond Check Fans DRY DRY 3.5 Deg K 4.5 Deg K Suct Superheat N/A Check Vibration Isolators AIR CONDENSERS Maj Disch Superheat 13.0 Deg K 11.3 Deg K N/A Subcooling @ 100% Condenser Coils Brushed Check Oil Sensors 7.2 Deg K 7.5 Deg K N/A N/A Condenser Chemical Cleaned 160.2 HZ Check Ambient Sensor N/A VSD Frequency G S & T CONDENSERS Maj DC Bus Voltage 542.0 VDC GG Check Chilled Water Sensor/s N/A Check Condenser Water Sensor/s Backplate Temp Remove End Covers 40.0 Deg C N/A N/A N/A Check EEV Control 28.9 Deg C Internal Ambient Condition of Tubes N/A N/A GG Condition of Water Boxes 52.3 Deg C 38.3 Deg C 43.1 Deg C Winding Thermistor Check S1 Sensor N/A N/A N/A MOTOR CHECKS Maj Check S2 Sensor Check for Water Leaks GG N/A System #1 Check LP Transducers System #2 System #3 System #4 GG CONTROL PANELS Min/Maj GG Check HP Transducers Comp. Windings G N/A Check Main Wiring G Check OP Transducers G G G G Cond Fans 1-4 Check Main Controller *5 50 KPaD Evaporator Water Box P.D. G G G G Cond Fans 5-8 G G Door Seals, Hinges & Latches N/A Condenser Water Box P.D. Cond Fans 9-12 Chiller Print-Out Taken NOT TESTED Glycol CW / CondW IS FURTHER WORK NEEDED. (Identify Below) *1 NO FAULTS FOUND

ENGINEER SIGNATURE: _____ DATE: _____ DO/01/1900



Address: 83 High Street,
Hemel Hempstead,
Hertfordshire, HP1 3AH.

Tele: +44 (0) 3300884720
Fax: +44 (0) 3300884721
info@orlandoaircon.co.uk

PPM REPORT - SCROLL CHILLERS

CUSTOMED NAME	CRULL	CHILLE	INO	CITE CONTACT (CS.	TOD DECROSS	01 5 500 5	CAC COMPLIANCE		CHEET NU MARES		
CUSTOMER NAME				SITE CONTACT (OPERA		SLE FOR F			SHEET NUMBER		0000
ACL ENGINEERING LTD				A NAM		-	A POS	SITION			0000
SITE NAME & ADDRESS				ENGINEER	STEVE ORLA	NDO			CLIENT ASSET N	UMBER	
CRN LTD, BANK HOUSE, PRIMO	TT RD, STEVEN	AGE. SG1 3EE		F-GAS QUALIFICATION	C&G 2079 PA	ART 1					0000
REASON FOR VISIT A VISIT				MANUFACTURER	A MANUFACT	URER		MODEL	A MODEL NUM	BER	
JOB NUMBER A JOB				SERIAL No.	A SERIAL NU	MBER		YEAR INSTALLED	01/01/1980		
PLANT LOCATION A LOCATION				REFRIGERANT TYPE	R22			QUANTITY (KG)	240.0 KG		
PLANT REFERENCE A PLANT REFE	RENCE			CLG LOAD SERVED	A COOLING I	OAD SE	RVED				
COMPRESSOR MANUFACTURER:	COPELAND		COMPRESSOR	R OIL TYPE: ICI EMC/	ARATE RL32CI	=			OIL VOLUME:	2 OFF 4.1 LTI	 RS
	ZR16M3E-TWD	-551	SERIAL:	RE1400208437	HRS RUN:		HRS RUN DIFF:	0	STARTS:	UNLOGGED	
COMPRESSOR A2 MODEL:	N/A	331	SERIAL:	RE1400207352	HRS RUN:		HRS RUN DIFF:	0	STARTS:	UNLOGGED	
	-			+							
COMPRESSOR A3 MODEL:	N/A		SERIAL:	RE1400208406	HRS RUN:		HRS RUN DIFF:	0	STARTS:	UNLOGGED	
	N/A		SERIAL:	RE1400208623	HRS RUN:		HRS RUN DIFF:	0	STARTS:	UNLOGGED	
COMPRESSOR B1 MODEL:	ZR16M3E-TWD	-551	SERIAL:	N/A	HRS RUN:	N/A	HRS RUN DIFF:	N/A	STARTS:	N/A	
COMPRESSOR B2 MODEL:	N/A		SERIAL:	N/A	HRS RUN:	N/A	HRS RUN DIFF:	N/A	STARTS:	N/A	
COMPRESSOR B3 MODEL:	N/A		SERIAL:	N/A	HRS RUN:	N/A	HRS RUN DIFF:	N/A	STARTS:	N/A	
COMPRESSOR B4 MODEL:	N/A		SERIAL:	N/A	HRS RUN:	N/A	HRS RUN DIFF:	N/A	STARTS:	N/A	
BOX CODES	YES	N NO	G GOOD	F FAIR	P POOR	E	BAD N	A NOT APPLIC	ABLE		_
SYS A COMP Min/Maj	<u>,</u>	CONTROL	PANFIS	Min/Mai	F-GAS	RFFRI	GERANT CHE	CKS Min/Ma	ni		
G Check Oil Level			Compressor	,	GG		Refrigerant Charg	•	.n		
N/A Check Oil Heater Operati	on		& Tighten Co		GG	Carry C	Out Leak Test with	n Electronic Leak	Detector		
G Check Compressor Pump	ing		Fan O/L		N/N	-	Found / Repaired				
N/A Pump Down Test	naustian		Timer Seque		GG		Pressure Relief Va				
N/A Check Starting Bypass O N/A Condition of Balance Line			Electrical Co	nnections Soft Starters	N/A	6/2018 Check I	PRV'S FIVE (5) Y Pressure Relief Va	Year Anniversary			
N Excessive Vibration	.5	Standard	Micro	Sort Starters	N/A	_	Fixed Leak Detect				
G Condition of Oil (One Sho	ot Test)	25.0 BarG	N/A	H.P Cut-Out	N	-	ere Health & Safet	•			
		0.5 BarG	N/A	L.P Cut-Out	OPERA	TION	CHECKS Min/	′Мај			
SYS B COMP Min/Maj		N/A	N/A	Pumpdown C/O			em A	<u> </u>	em B	7	
G Check Oil Level	on	N/A	/A 3 0 Dog	Oil Press C/O) KPaG 0 KPaG	+	KPaG KPaG	Evap Pressure Cond Pressur	
N/A Check Oil Heater Operati G Check Compressor Pump				C LTL Cut-Out Cut-Out Pressure		1010.0	10.5 D		UKFAG	Chid Water O	
N/A Pump Down Test	9		low Switches				7.3 De			Chid Water O	
N/A Check Starting Bypass O	peration	9.0 Deg C	Temp Contr	ol S.P			N//	A		Cond Water (ON
N/A Condition of Balance Line	es	1.5 Deg C	1	ol D.B/Range			N//			Cond Water ()FF
N Excessive Vibration G Condition of Oil (One Shi	ot Tost)	N/A	1	nt Temp C/O	10 5	Amno	17.6 D		NI / A	Ambient	inc
G Condition of Oil (One Sho	or rest)	N/A N/A	Condenser I	nt Temp C/O Fan S.P	18.5	Amps 17.6	N/A Amps	N/A N/A	N/A N/A	System A Am System B Am	•
SYS A & B COMP Maj		N/A	Condenser I				Deg C	•	Deg C	Oil Temp	~~
NN Oil Sample to Lab		N/A	-	re Force Unload			/A		/A	EEV Position	
GG Electrical Terminal Box		UNIT CON		,			0.0%	100	.0%	Stages %	
N/A IC Card Operation			-	twork & AV Mounts	OPERA		CHECKS Maj	•	one D		
AIR CONDENSERS Min	/Mai		Pipework & I Solenoid Val			Syst	em A	Syst	em B	Evap Tsat	
GG Condition of Coils	riaj			hut-off Valves						Suction Temp)
GGG Check Fans			Seals, Hinges			0.0	Deg K	0.0	Deg K	Suct Superhe	
AIR CONDENSERS Maj		DRY	DRY	Site Glass Cond.						Cond Tsat	
Y Condenser Coils Brushed		40.0 KPaD	1	Water Box P.D		_				Discharge Tel	
N Condenser Chemical Clea		N/A	4	Nater Box P.D		0.0	Deg K	0.0	Deg K	Disch Superh	
S & T CONDENSERS M	aj	NOT TESTED		<i>Conaw</i> ION Min/Maj		0 0 5	Deg K	1 0 0	Deg K	Liquid Line Te Subcooling	зпр
N/A Condition of Tubes			Ambient Ser	•		G 0.0 L	G	N/A	N/A	A Winding Th	erm
N/A Condition of Water Boxes	S		Chilled Wate			G	G	G	N/A	B Winding Th	
N/A Check for Water Leaks		N/A Check	Condenser V	Vater Sensor/s	MOTO	R CHE	CKS Maj				
	N/1		-	ture Sensors	Comp #1		Comp #2	Comp #3	Comp #4	CVC 4	
CONTROL PANELS Min/	ı ^M la]		EEV S1 / S2			Ohms Ohms	N/A	N/A	N/A	SYS A Windin	
G Check Main Wiring G Check Main Controller			L.P Transduc H.P Transdu	•		IPS 3PH	N/A 1.1 AMPS 3PH	N/A 1.1 AMPS 3PH	N/A N/A	SYS B Windin	
G Door Seals, Hinges & Lat	ches			Transducer/s		/A	N/A	N/A	N/A	Cond Fans 5-	
N/A Load / Unload of Compre		<u> </u>		ressure Transducer		/A	N/A	N/A	N/A	Cond Fans 9-	
N Chiller Print-Out Taken		G Check	Safety Flow	/ Interlocks	N	IS FUR	RTHER WORK NE	EDED. (Identif	y Below)	-	
AULTS FOUND:											
*1 NO OTHER FAULTS TO RE	PORT.										

*1 NO OTHER FAULTS TO REPORT.

ENGINEER SIGNATURE: _____ CUSTOMERS SIGNATURE: _____ DATE: ____ DATE: _____



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720 Fax: +44 (0) 3300884721 info@orlandoaircon.co.uk

Hertfordshire, HP1 3AH. PPM REPORT - CENTRIFUGAL CHILLERS SHEET NUMBER **CUSTOMER NAME** SITE CONTACT (OPERATOR RESPONSIBLE FOR F-GAS COMPLIANCE) 00000 ACL ENGINEERING LTD A NAME A POSITION STEVE ORLANDO **ENGINEER** CLIENT ASSET NUMBER SITE NAME & ADDRESS 00000 CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE F-GAS QUALIFICATION C&G 2079 PART 1 REASON FOR VISIT A VISIT A MANUFACTURER MODEL A MODEL NUMBER MANUFACTURER A JOB A SERIAL NUMBER YEAR INSTALLED 01/01/1980 JOB NUMBER SERIAL No. A LOCATION REFRIGERANT TYPE R22 240.0 KG QUANTITY (KG) PLANT LOCATION A COOLING LOAD SERVED A PLANT REFERENCE **CLG LOAD SERVED** PLANT REFERENCE **MOBIL EAL ARCTIC 46** 20 LTRS COMPRESSOR MANUFACTURER: McQUAY. SPEED CODE - AR. **COMPRESSOR OIL TYPE:** OIL VOLUME: HRS RUN: 36669 56C0084001 GEO79 JAR23K OX 28627 COMPRESSOR 1 MODEL: SERIAL: STARTS: NO P POOR N/A NOT APPLICABLE YES G GOOD F FAIR **BOX CODES** Y N BAD COMPRESSOR Min/Maj CONTROL PANELS Min/Maj F-GAS REFRIGERANT CHECKS Min/Maj N/A Check Oil Level N/A Check Fan O/L Check Refrigerant Charge Check Oil Heater Operation Check Timer Sequences Carry Out Leak Test with Electronic Leak Detector Check Compressor Pumping Check Electrical Connections Y/N Leaks Found / Repaired Check Inlet Guide Vane Check Comp Soft Starters Check Pressure Relief Valves 30/06/2013 PRV's Five (5) Year Anniversary Hours Run Inspection Required Standard Micro **COMPRESSOR Maj** H.P Cut-Out Check Pressure Relief Valve Vent Line 14.6 BarG 9.7 BarG *3 Replace Internal Oil Filter/s L.P Cut-Out Check Fixed Leak Detection System N/A 1.8 BarG Pumpdown C/O 0.1 BarG Are There Health & Safety Risks N/A **OPERATION CHECKS Min/Maj** OIL RES Min/Maj 4.1 BarG Oil Press C/O N/A Oil Sample Test (One Shot) LTL Cut-Out N/A 2.0 Deg C System #1 System #2 System #3 System #4 **UNTESTED** 100% Oil Separator Level Actual H.P Cut-Out Pressure N/A N/A N/A Evap Pressure 8.5 Deg C Temp Control S.P N/A N/A N/A Cond Pressure Check Heater Operation Internal Oil Pump Operation Oil Pressure Temp Control S.P - C/O 1.6 Deg C N/A N/A N/A External Oil Pump Operation 3.0 Deg C Temp Control S.P + CI N/A Oil Differential N/A N/A Chld Water ON OIL RESERVOIR Maj AR Time Strt - Strt 40 Mins N/A N/A N/A Oil Sample Taken (Lab Test) Chld Water OFF 20 Mins AR Time Stp - Strt 87.0 Deg C Replace External Oil Filter High Disch. Temp C/O Cond Water ON OIL COOLING Min/Maj High Suct Temp C/O 22.0 Deg K Cond Water OFF Check TX Valve Operation Winding Temp C/O 115.0 BarG N/A N/A N/A Ambient N/A Check Plate HX Operation 100.0% Current Module S.P Compressor Amps N/A N/A N/A 115.0 BarG Oil Temp Winding Temp C/O N/A N/A N/A LIQUID INJECT Min/Maj N/A N/A Oil Clg Temp Diff. 100.0% Current Module S.P N/A EEV Position Check Injection Valve Operation N/A N/A N/A N/A UNIT CONDITION Min/Maj N/A NO FEEDBACK N/A N/A IGV Position AIR CONDENSERS Min/Maj **OPERATION CHECKS Maj** Check Panels & Paintwork N/A Condition of Coils Check Insulation System #1 System #2 System #3 System #4 N/A Check Fans Check Pipework Evap Tsat AIR CONDENSERS Maj Suction Temp Check Solenoid Valves Sight Glass Cond Suct Superheat Condenser Coils Brushed В 0.0 Deg K *4 0.0 Deg K 0.0 Deg K 0.0 Deg K Check Vibration Isolators Condenser Chemical Cleaned Cond Tsat S & T CONDENSERS Maj 30.0 KPaD Evaporator Water Box P.D Discharge Temp 65.0 KPaD 0.0 Deg K 0.0 Deg K Disch Superheat Remove End Covers Condenser Water Box P.D. 0.0 Deg K 0.0 Deg K Liquid Line Temp Condition of Tubes Glycol CW / CondW N/A 0.0 Deg K Condition of Water Boxes Subcooling 0.0 Deg K 0.0 Deg K 0.0 Deg K SENSOR CALIBRATION Min/Maj Winding Thermistor Check for Water Leaks 0.0 Deg C 0.0 Deg C 0.0 Deg C N/A Check Ambient Sensor Cond Approach 0.0 Deg C 0.0 DegC CONTROL PANELS Min/Maj 0.0 Deg C Check Chilled Water Sensor/s 0.0 DegC 0.0 DegC Evap Approach MOTOR CHECKS Mai Check Main Wiring Check Condenser Water Sensor/s Check Main Controller Check EEV S1 Sensor System #1 System #2 System #3 System #4 Door Seals, Hinges & Latches Check EEV S2 Sensor N/A Comp. Windings 0.5 Ohms N/A N/A Check L.P Transducer/s Cond Fans 1-4 G Load / Unload of Compressor N/A N/A N/A N/A Check Compressor Contactors Check H.P Transducer/s N/A N/A N/A N/A Cond Fans 5-8 Cond Fans 9-12 Check & Tighten Connection Check Oil Pressure Transducer/s N/A N/A N/A N/A Chiller Print-Out Taken G/G Check Safety Flow Switch/s / Interlocks IS FURTHER WORK NEEDED. (Identify Below) **FAULTS FOUND:** *1 NO FAULTS FOUND

ENGINEER SIGNATURE: _____ DATE: ____ DO/01/1900



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH.

+44 (0) 3300884720 Tele: +44 (0) 3300884721 Fax: info@orlandoaircon.co.uk

CUSTOMER NAME				SITE CONTACT (OPERATO	R RESPONS	SIBLE FOR F-G	GAS COMPLIANCE)		SHEET NUMBER	
ACL ENGINEERING LTD				A NAME		SITION		00000		
SITE NAME & ADDRESS				ENGINEER	STEVE	ORLANDO			CLIENT ASSET NU	
CRN LTD, BANK HOUSE, PRIMOTT RE	, STEVENAG	E. SG1 3EE		F-GAS QUALIFICATION	C&G 20	79 PART 1				00000
REASON FOR VISIT A VISIT				MANUFACTURER	A MANU	JFACTURER		MODEL	A MODEL NUME	BER
JOB NUMBER A JOB				SERIAL No.	A SERI	AL NUMBER		YEAR INSTALLED	01/01/1980	
PLANT LOCATION A LOCATION				REFRIGERANT TYPE	R22			QUANTITY (KG)	240.0 KG	
PLANT REFERENCE A PLANT REFERENCE	CE			CLG LOAD SERVED	A COOL	ING LOAD S	SERVED			
COMPRESSOR 1 MODEL: TT33	0-H6-1-ST-E	-0-CE	PART No:	194120		SERIAL:	123475130		CAPACITOR EXP.	30/01/2018
COMPRESSOR 2 MODEL: TT33	0-H6-1-ST-E	-0-CE	PART No:	194120		SERIAL:	123485120		CAPACITOR EXP.	30/01/2018
COMPRESSOR 3 MODEL: N/A			PART No:	N/A		SERIAL:	N/A		CAPACITOR EXP.	N/A
COMPRESSOR 4 MODEL: N/A			PART No:	N/A		SERIAL:	N/A		CAPACITOR EXP.	N/A
BOX CODES Y Y	ES N	NO NO	G GOOD	F FAIR P	POOR	В	BAD N/A	NOT APPLICABI	LÉ	
COMPRESSOR Min/Maj		UNIT CO	NDITION Mir	ı/Maj	OF	PERATION	NAL CONTRO	L Min/Maj		
GGG Check Covers are Secure		GG Che	ck Panels & Paintv	vork	Cor	mp #1	Comp #2	Comp #3	Comp #4	
GGG Check Electrical Harnesses		GG Che	ck Insulation			90.0%	90.0%	N/A	N/A	Loading Demand
Compressor Pumping	*3	FF Che	ck Pipe work			110.0%	110.0%	N/A	N/A	Inlet Guide Vane
LIQUID INJECT Min/Maj		G Che	ck Solenoid Valves	5	2	49.4 KPaG	250.8 KPaG	N/A	N/A	Suction Pressure
GGG Check Injection Valve Operati	on	G Che	ck Motorised Shut	-off Valves	11	176.2 KPaG	1156.6 KPaG	N/A	N/A	Discharge Pressure
SUBCOOLER Min/Maj		Doc	r Seals, Hinges &	Latches	4	4.1 Deg C	7.7 Deg C	N/A	N/A	Suction Temp
N/A Check TX Valve Operation		DRY	DRY	Site Glass Cond.	2	24.2 Deg C	24.4 Deg C	N/A	N/A	Discharge Temp
N/A Check Plate HX Operation		25.0 KPa	D Evaporator W	ater Box P.D	6	0.6 Deg C	60.8 Deg C	N/A	N/A	SCR Temp
AIR CONDENSERS Min/Mag	j	N/A	Condenser W	ater Box P.D	4	9.7 Deg C	52.9 Deg C	N/A	N/A	Cavity Temp
*1 FF Condition of Coils		NOT TEST	ED Glycol CW / C	CondW	5	52.5 Deg C	50.0 Deg C	N/A	N/A	BMCC Temp
GG Check Fans		SENSOF	CALIBRATIO	N Min/Maj	4	0.9 Deg C	38.8 Deg C	N/A	N/A	Inverter Temp
AIR CONDENSERS Maj		G Che	ck Ambient Senso	r		14.3	Deg C	N	N/A	Chilled Water On
YY Condenser Coils Brushed		GG Che	ck Chilled Water S	Sensor/s		7.4 [Deg C	N	N/A	Chilled Water Off
NN Condenser Chemical Cleaned		N/A Che	ck Condenser Wat	er Sensor/s			2.1	DegC		Ambient
S & T CONDENSERS Maj		GG Che	ck Turbocor Temp	. Sensors		N	I/A	N	N/A	Cond Water On
N/A Remove End Covers		GG Che	ck L.P Transducer,	/s		N	I/A	N	N/A	Cond Water Off
N/A Condition of Tubes	*4	GG Che	ck H.P Transducer	r/s	MA	AGNETIC	BEARING M	ONITORING	Мај	
N/A Condition of Water Boxes		G/G Che	ck Safety Flow Sw	ritch/s / Interlocks	Cor	mp #1	Comp #2	Comp #3	Comp #4	
N/A Check for Water Leaks		F-GAS C	CHECKS Min /	Maj		0.40%	0.30%	0.30%	0.30%	Axial Un-Balance
CONTROL PANELS Min/Maj		GG Che	ck Refrigerant Cha	arge		0.20%	1.10%	0.20%	0.20%	Front Radial Unbalance
G Check Main Wiring		YY Lea	k Test with Electro	nic Detector		0.20%	0.60%	0.20%	0.20%	Rear Radial Unbalance
G Check Electrical Connections		NN Lea	ks Found / Repaire	ed	-(0.30 Amps	-0.60 Amps	-0.60 Amps	0.33 Amps	Axial Bearing Force
G Check Compressor buss Bars		GG Che	ck Pressure Relief	Valves	C	0.20 Amps	0.30 Amps	-0.20 Amps	0.20 Amps	Front X Bearing Force
GGG Check Inductor & Harmonic Fi	lter	30/01/20	18 <i>PRV's Five (5)</i>) Year Anniversary	C	0.30 Amps	-0.40 Amps	0.00 Amps	0.20 Amps	Front Y Bearing Force
G Check Main Controller		N/A Che	ck PRV Vent Line		C	0.40 Amps	0.20 Amps	0.30 Amps	0.20 Amps	Rear X Bearing Force
N/A Check EEV Driver Interface		B Che	ck Fixed Leak Det	ection Syst.	C	0.40 Amps	-0.20 Amps	0.30 Amps	0.20 Amps	Rear Y Bearing Force
G Check EEV Battery Pack		Y Are	There Health & Sa	afety Risks	CC	MPRESS	OR MAP Min	/Maj		
G Check Fan O/L		COND F	AN MOTOR CI	HECKS Maj		44.4 kW	39.7 kW	N/A	N/A	Power Input
G Check Cond Fan Voltage Reg		3.7 A 3P	H 3.7 A 3PH	3.8 A 3PH <i>1-3</i>	2	20017 RPM	19543 RPM	N/A	N/A	Shaft Speed
7.0 Deg C Temp Control S.P		3.8 A 3P	H 3.8 A 3PH	3.7 A 3PH <i>4-6</i>		53.1%	49.0%	N/A	N/A	Efficiency
1.6 Deg C Temp Control Ran	ge	3.7 A 3P	H 3.8 A 3PH	3.7 A 3PH <i>7-9</i>		2.120	2.050	N/A	N/A	Compression Ratio
11.0 Deg C Seq. / BMS Contro	S.P	3.8 A 3P	H 3.8 A 3PH	3.7 A 3PH <i>10-12</i>	88	9 (889 <i>Diff</i>)	890 (890 <i>Diff</i>)	N/A	N/A	Hours Run
SAFETY LIMITS Min/Maj		3.7 A 3P	H 3.7 A 3PH	3.7 A 3PH <i>13-15</i>	88	9 (889 <i>Diff</i>)	890 (890 <i>Diff</i>)	N/A	N/A	No. Starts
Micro Manual		3.8 A 3P	H 3.7 A 3PH	3.8 A 3PH <i>16-18</i>	OF	PERATION	N CHECKS M	aj		
14.6 BarG 9.7 BarG <i>H.P</i> (Cut-Out	N/A	N/A	N/A 19-21	Sys	stem #1	System #2	System #3	System #4	
N/A 1.8 BarG L.P C	ut-Out	SOFTWA	ARE REF Min/I	Мај	1	L.5 Deg K	N/A	N/A	N/A	Suct Superheat
2.0 Deg C LTL Cut-Out			W3000	Chiller Software Ref	1	2.0 Deg K	N/A	N/A	N/A	Disch Superheat
UNTESTED Actual H.P Cut-Out	Press	CA	1.15.02 GB	Chiller Software Rev		1.5 Deg K	N/A	N/A	N/A	Subcooling @ Full Load
80.0 Deg C Cavity Temp Alarm			2.0.2685	Turbocor BCM Rev		1393	N/A	N/A	N/A	EEV Position
75.0 Deg C Inverter Temp Lim	it	25	5 / 25 / 25	Turbocor Config Ver		2.4 Deg C	N/A	N/A	N/A	Evap Approach
75.0 Deg C SCR Temp Limit			1.3.917	Turbocor CC Rev	N	IS FUR	THER WORK NE	EDED.		
*1 NO FAULTS TO REPORT										

CUSTOMERS SIGNATURE: ENGINEER SIGNATURE: _____ DATE: 00/01/1900



Address: 83 High Street,

Hemel Hempstead, Hertfordshire, HP1 3AH.

+44 (0) 3300884720 Tele: +44 (0) 3300884721 Fax: info@orlandoaircon.co.uk

PPM RFPORT - SINGLE STAGE ABSORBER

THE REPORT STRUCK ADSORDER				
CUSTOMER NAME	SITE CONTACT (OPERATO	R RESPONSIBLE FOR F-GAS COMPLIANCE)		SHEET NUMBER
ACL ENGINEERING LTD	A NA	AME -	A POSITION	00000
SITE NAME & ADDRESS	ENGINEER	STEVE ORLANDO		
CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE	F-GAS QUALIFICATION	C&G 2079 PART 1		
REASON FOR VISIT A VISIT	MANUFACTURER	A MANUFACTURER	MODEL	A MODEL NUMBER
JOB NUMBER A JOB	SERIAL No.	A SERIAL NUMBER	YEAR INSTALLED	01/01/1980
PLANT LOCATION A LOCATION	REFRIGERANT R717	R22	QUANTITY (KG)	240.0 KG
PLANT REFERENCE A PLANT REFERENCE	CLG LOAD SERVED	A COOLING LOAD SERVED		
BOX CODES Y YES N NO G GOOD F	FAIR P	POOR B BAD N/A N	OT APPLICABLE	

VACUU	M PUMP Min/Maj
N/A	Check Oil Level / Condition
G	Check Drive Belt
G	Test Vacuum Achieved
1.0 Amps	Motor Current
G	Contactor Condition
52	Hours Run
171	Number Starts
VACUU	M PUMP OIL Maj

ABSORB. CHECKS Min/Maj

Replace Oil

	,
N	Motor Rotation Test
0.8 Amps	Motor Current
G	Contactor Condition
4605	Hours Run
491	Number Starts
ADCODE	CHECKS Ma

ABSORB. CHECKS Maj

Y	Blow Down Refrigerant
N	Take Sample for Analysis

REFRIG. CHECKS Min/Maj

N	Motor Rotation Test
1.1 Amps	Motor Current
G	Contactor Condition
4306	Hours Run
9001	Number Starts
	ı

REFRIG. CHECKS Maj Blow Down to Burify

	BIOW DOWN TO PUTITY
N	Check Spec Gravity

CONTROL PANELS Min/Maj

G	Check Main Wiring
G	Check Main Controller
G	Door Seals, Hinges & Latches
G	Sensor Calibration
F	Test Outputs
Y	Test Display
N	Test Gen High Press Switch
Y	Test Low Ref. Lvl Safety Switch
N	
	Test CW Flow Switch
	Test CondW Flow Switch
	_

ANCTI I ARY PLANT Min/Mai

VIICTEL	AKI PLANI MIII/Maj
G	Clg Tower/ Dry Clr Condition
G	CHW Pump Set Condition
G	CondW Pump Set Condition
G	LTHW Pump Condition
F	Steam Trap Condition
Y	Primary Heat Source VIv Oper.

CONTROL SAFETIES Min/Maj

CONTINUE SALET.	
Standard	Micro
14.6 BarG	9.7 BarG Gen H.P Cut-Out
N/A	1.8 BarG LTL Cut-Out
N/A	0.1 BarG Chryst. Safety S.F
N/A	4.1 BarG Ref. Pmp Safety
UNTESTED	Actual Gen H.P Cut-Out Press
7.0 Deg C	Temp Control S.P
1.0 Deg C	Temp Control S.P - C/O
55.0 Deg C	Gen Temp S.P
100 Mins	Max Valve Open Pos
-	Max CondW Temp
87.0 Deg C	Max Generator Temp
20 Mins	Max CondW Temp
87.0 Deg C	Max Generator Temp
22.0 Deg K	Max Loading S.P

UNIT CONDITION Min/Maj

F	Check Panels & Paintwork				
F	Check Insulation				
G	Check Pipework				
G	Check Solenoid Valves				
G	G	G	Sight Glass LVL		

OPERATION CHECKS Min/Maj

SITE	DESIGN	GENERATOR DATA
64.0 DegC	65.0 DegC	LTHW Temperature Inlet
55.0 DegC	55.0 DegC	LTHW Temperatur Outlet
5.0 DegC	5.0 DegC	LTHW Temp Differential (A)
-	-	LTHW Inlet Pressure
-	-	LTHW Outlet Pressure
#VALUE!	#VALUE!	LTHW Generator P.D Full Flow
8.0 L/S	10.0 L/S	LTHW Flow Rate (B)
	-	Generator Pressure
	-	Strong Solution Temp (GEN)
	-	Strong Solution Concerntration
	100.0	LTHW Valve Position (% OPEN)
	-	Generator Approach
SITE	DESIGN	EVAPORATOR DATA
SITE 12.0 DegC	DESIGN 12.0 DegC	EVAPORATOR DATA CHW Inlet Temperature
		٦
12.0 DegC	12.0 DegC	CHW Inlet Temperature
12.0 DegC 6.3 DegC	12.0 DegC 6.0 DegC	CHW Inlet Temperature CHW Outlet Temperature
12.0 DegC 6.3 DegC	12.0 DegC 6.0 DegC	CHW Inlet Temperature CHW Outlet Temperature CHW Temperature Diff (E)
12.0 DegC 6.3 DegC	12.0 DegC 6.0 DegC	CHW Inlet Temperature CHW Outlet Temperature CHW Temperature Diff (E) CHW Inlet Pressure
12.0 DegC 6.3 DegC	12.0 DegC 6.0 DegC	CHW Inlet Temperature CHW Outlet Temperature CHW Temperature Diff (E) CHW Inlet Pressure CHW Outlet Pressure
12.0 DegC 6.3 DegC 5.7 DegC	12.0 DegC 6.0 DegC 6.0 DegC - -	CHW Inlet Temperature CHW Outlet Temperature CHW Temperature Diff (E) CHW Inlet Pressure CHW Outlet Pressure CHW Pressure Differential
12.0 DegC 6.3 DegC 5.7 DegC	12.0 DegC 6.0 DegC 6.0 DegC - -	CHW Inlet Temperature CHW Outlet Temperature CHW Temperature Diff (E) CHW Inlet Pressure CHW Outlet Pressure CHW Pressure Differential CHW Flow Rate (F)

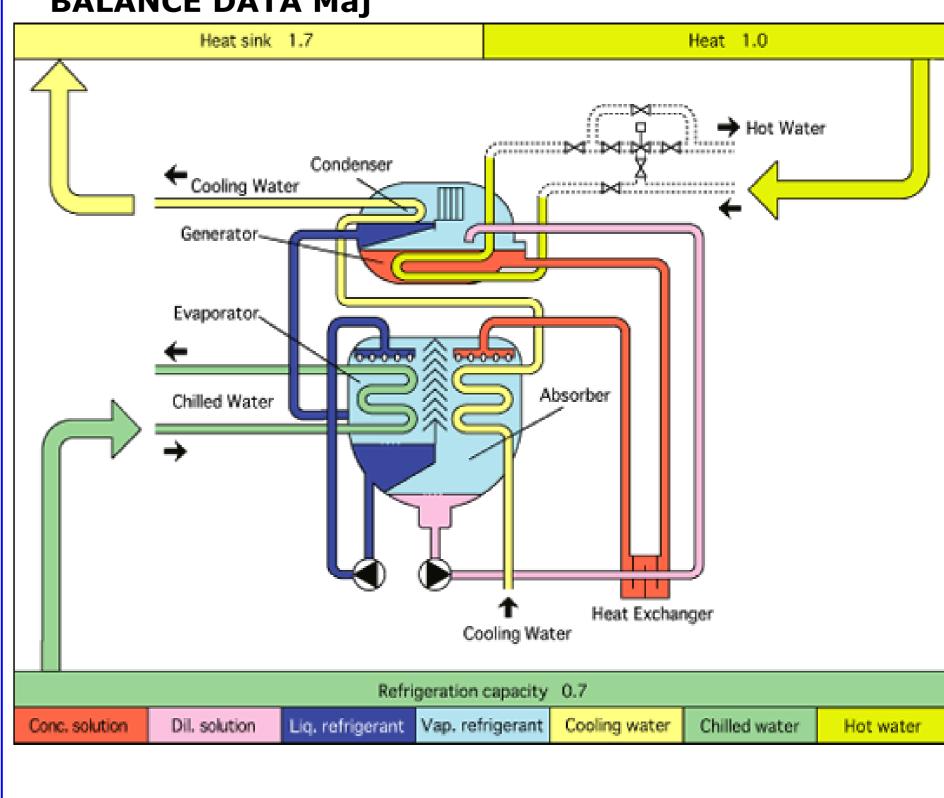
OPERATION CHECKS Min/Maj

SITE	DESIGN	ABSORBER DATA
28.8 DegC	31.0 DegC	CDW Inlet Temperature
33.8 DegC	36.0 DegC	CDW Outlet Temperature
	-	CDW Temperature Leaving Absorber.
5.0 DegC	5.0 DegC	CDW Temperature Differential (C)
-	-	CDW Inlet Pressure
-	-	CDW Outlet Temperature
-	-	CDW Pressure Differential
-	-	CDW Pressure Differential Full Bypass
31.1 L/S	31.1 L/S	CDW Flow Rate (D)
-	-	HX Outlet Temperature (ABSORB)
-	-	Weak Solution Temperature (TO HX)
-	-	HX Outlet Temperature (ABSORB)
-	-	Weak Solution Temperature (TO HX)

SOLUTION MAKE UP

90.0 KG	Refrigerant (H2O)
620.0 KG	Lithium Bromide (LiBr 50WT%)
360.0 CC	Inhibitor (Li2MoO4)
1120.0 CC	Octyle Alcohol (CH3(CH2)5CH(OH)CH3)

BALANCE DATA Maj



	GENERATOR	+	EVAPORATOR	=	ABSORBER
	(A * B * 4.187)	+	(E * F * 4.187)	=	(C * D * 4.127)
DESIGN	209.4 kW	+	519.8 kW	=	651.1 kW
SITE COND	167.5 kW	+	494.0 kW	=	651.1 kW

FAULTS FOUND:

*1 NO FAULTS FOUND



PPM REPORT - CHILLER LOGS

A LOCATION

PLANT REFERENCE A PLANT REFERENCE

PLANT LOCATION

Address:

83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720 Fax: +44 (0) 3300884721 info@orlandoaircon.co.uk

240.0 KG

QUANTITY (KG)

CUSTOMER NAME	SITE CONTACT (OPERA	ATOR RESPONSIBLE FOR F-GAS	S COMPLIANCE)	SHEET NUMBER	
ACL ENGINEERING LTD	A NAME	-	A POSITION		00000
SITE NAME & ADDRESS	ENGINEER	STEVE ORLANDO		CLIENT ASSET NUMBER	
CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE	F-GAS QUALIFICATION	C&G 2079 PART 1			00000
REASON FOR VISIT A VISIT	MANUFACTURER	A MANUFACTURER	MODEL	A MODEL NUMBER	
JOB NUMBER A JOB	SERIAL No.	A SERIAL NUMBER	YEAR INSTALLED	01/01/1980	

TURBOCOR COMPRESSOR LOG CAPTURE

REFRIGERANT TYPE

CLG LOAD SERVED

R22

A COOLING LOAD SERVED



Address: 83 High Street,

Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720
Fax: +44 (0) 3300884721
info@orlandoaircon.co.uk

PPM REPORT - COMPUTER ROOM A/C

	ORT COTTO LER ROOTTY					
CUSTOMER NAME		SITE CONTACT (OPERATOR RESPONSIBLE FOR F-GAS COMPLIANCE)			SHEET NUMBER	
ACL ENGINEERING	G LTD	A NAM	1E - A	POSITION		00000
SITE NAME & ADDRE	ESS	ENGINEER	STEVE ORLANDO		CLIENT ASSET NUMBER	
CRN LTD, BANK H	HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE	F-GAS QUALIFICATION	C&G 2079 PART 1			00000
REASON FOR VISIT	A VISIT	MANUFACTURER	A MANUFACTURER	MODEL	A MODEL NUMBER	
JOB NUMBER	A JOB	SERIAL No.	A SERIAL NUMBER	YEAR INSTALLED	01/01/1980	
PLANT LOCATION	A LOCATION	REFRIGERANT TYPE	R22	QUANTITY (KG)	240.0 KG	
PLANT REFERENCE	A PLANT REFERENCE	CLG LOAD SERVED	A COOLING LOAD SERVED			

	A PLANT REFERENCE													
AIR HANDLER	MANUFACTURE	MODEL	SERIAL	EVAP FAN A CURRENT	EVAP FAN A BELT COND.	EVAP FAN A PULLEY COND.	EVAP FAN A BEARING COND	EVAP FAN B CURRENT	EVAP FAN B BELT COND.	EVAP FAN B PULLEY COND.	EVAP FAN B BEARING COND	EVAP AIR ON TEMP (C)	EVAP AIR OFF TEMP - GLG (C)	CHILLED WATER VALVE OP.
	DAIKIN	FAQ100BVV1B	C005081	0.2 A 1PH	OK	OK	OK	0.1 A 1PH	OK	OK	OK	18.2 C	8.7 C	N/A
AHU UNIT	ELECTRIC RE-HEAT 1 CURRENT	ELECTRIC RE-HEAT 2 CURRENT	ELECTRIC RE-HEAT 3 CURRENT	O/HEAT KLIXON COND.	HUMIDIFIER CURRENT	BOTTLE CONDITION	SOLENOID CONDITION	HUMIDIFIER DRAIN TEST	TEMP SENSOR CAL	HUM SENSOR CAL	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROG
	5.5 A 1PH	5.5 A 1PH	5.5 A 1PH	OK	5.5 A 1PH	OK	OK	OK	LOCAL OK	LOCAL OK	TESTED OK	VACUUMED OK	OK	OK
COMPRESSORS	COMPRESSOR TYPE	COMPRESSOR MODEL	COMPRESSOR SERIAL	COMPRESSOR CURRENT	COMPRESSOR SUCTION PRESSURE	SUCTION REFRIG Tsat C	SUCTION LINE TEMP	COMPRESSOR DISCH PRESSURE	DISCHARGE REFRIG Tsat C	DISCHARGE LINE TEMP	SUBCOOLING	OIL LEVEL	COMP PUMPING	COMP RUN HOURS
COMP 1.	SCROLL	K71002072AF	AASSS33	0.1 A 1PH	1.00 BarG	1.0 C	1.0 DegC	1.00 BarG	1.0 T-Sat C	1.0 C	1.0 K	OK	OK	100
COMP 2.	SCROLL	K71002072AF	AAASSD	0.1 A 1PH	1.00 BarG	1.0 C	1.0 DegC	1.00 BarG	1.0 T-Sat C	1.0 C	1.0 K	OK	OK	100
CONDENSERS	CONDENSER MODEL	FAN 1 CURRENT	FAN 2 CURRENT	FAN 3 CURRENT	FAN 4 CURRENT	SPEED CONTROL OPERATION	PRESSURE RELIEF VALVE CONDITION	REFRIGERANT CHARGE	SYSTEM F-GAS LEAK TEST	SYSTEM LEAKS FOUND / REPAIRED	CONDENSER CONDITION	CONDENSER BRUSHED	REFRIG MOISTURE INDICATOR	ONE SHOT ACID & MOISTURE TEST RESULT
REMOTE COND.1	FDC71VN	0.1 A 1PH	0.1 A 1PH	0.1 A 1PH	0.1 A 1PH	ОК	OK	FULL	PASS	NIL	ОК	YES	DRY	PASS
REMOTE COND.2	FDC71VN	0.1 A 1PH	0.1 A 1PH	0.1 A 1PH	0.1 A 1PH	ОК	OK	FULL	PASS	NIL	ОК	YES	DRY	PASS

FAULTS FOUND:		
* NO FAULTS TO REPORT		

ENGINEER SIGNATURE: _____ DATE: _____ DATE: _____ DATE: _____



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720
Fax: +44 (0) 3300884721
info@orlandoaircon.co.uk

PPM REPORT - SPLIT AIR-CONDITIONER

CUSTOMER NAME	SITE CONTACT (OPER	RATOR RESPONSIBLE FOR F-GAS COMPLIANCE)		SHEET NUMBER	
ACL ENGINEERING LTD	A N	AME - A	POSITION		00000
SITE NAME & ADDRESS	ENGINEER	STEVE ORLANDO		CLIENT ASSET NUMBER	
CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAGE. SG1 3EE	F-GAS QUALIFICATIO	N C&G 2079 PART 1			00000
REASON FOR VISIT A VISIT	MANUFACTURER	A MANUFACTURER	MODEL	A MODEL NUMBER	
JOB NUMBER A JOB	SERIAL No.	A SERIAL NUMBER	YEAR INSTALLED	01/01/1980	
PLANT LOCATION A LOCATION	REFRIGERANT TYPE	R22	QUANTITY (KG)	240.0 KG	
PLANT REFERENCE A PLANT REFERENCE	CLG LOAD SERVED	A COOLING LOAD SERVED			

						A PLA	NT REFER	RENCE							
REFERENCE	REFERENCE MANUFACT. MODEL SERIAL EVAP FAN CURRENT EVAP AIR ON TEMP (C) EVAP AIR OFF TEMP - GLG (C) EVAP AIR OFF TEMP - HTG (C) CALIBRATION PROG. CONTROLLER PROG. CONTROLLER PROG. TEST DRAIN OPERATION OPERATION OPERATION RETURN AIR FILTER ELECTRIC HARNESS REFRIGERANT LEAK TEST PRAIN OPERATION REPAIRED														
INDOOR FCU	A MANUFACTURER	FAQ100BVV1B	C005081	0.2 A 1PH	22.1 C	9.1 C	29.5 C	OK	CHECKED OK	ОК	CLEANED	OK	PASS	NIL	
	CONDENSER MODEL	SERIAL	COMPRESSOR MODEL	CONTROL MODE	INPUT COMP CURRENT	CONDER FAN/S CURRENT	COMPRESSOR SUCTION PRESSURE	COMPRESSOR DISCHARGE PRESSURE		DISCH TEMP / SAT DISH TMP	SUBCOOLING	SYSTEM REFRIG. CHARGE	F-GAS REFRIGERANT LEAK TEST	ONE SHOT ACID / MOISTURE TEST RESULT	
OUTDOOR UNIT	A MODEL NUMBER	A SERIAL NUMBER	INV SCROLL	COOLING	3.2 A 1PH	0.1 A 1PH	-	-	-	-	-	FULL	PASS	-	
				HEATING	3.2 A 1PH	0.2 A 1PH	-	-	-	-	-	FULL			

FAULTS FOUND:	
* NO FAULTS TO REPORT	

ENGINEER SIGNATURE: _____ CUSTOMERS SIGNATURE: _____ DATE: _____ DATE: _____



Address: 83 High Street, Hemel Hempstead,

Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720 Fax: +44 (0) 3300884721 info@orlandoaircon.co.uk

PPM REPORT - MULTISPLIT/VRV SYSTEM

		. —				
CUSTOMER NAME		SITE CONTACT (OPER/	ATOR RESPONSIBLE FOR F-GAS COMPLIANCE)		SHEET NUMBER	
ACL ENGINEERING	G LTD	A N	IAME - A	POSITION		00000
SITE NAME & ADDRE	:SS	ENGINEER	STEVE ORLANDO		CLIENT ASSET NUMBER	
CRN LTD, BANK H	OUSE, PRIMOTT RD, STEVENAGE. SG1 3EE	F-GAS QUALIFICATION	C&G 2079 PART 1			00000
REASON FOR VISIT	A VISIT	MANUFACTURER	A MANUFACTURER	MODEL	A MODEL NUMBER	
JOB NUMBER	A JOB	SERIAL No.	A SERIAL NUMBER	YEAR INSTALLED	01/01/1980	
PLANT LOCATION	A LOCATION	REFRIGERANT TYPE	R22	QUANTITY (KG)	240.0 KG	
PLANT REFERENCE	A PLANT REFERENCE	CLG LOAD SERVED				

			VR	V COND	ENSING	G UNIT S	ERVING 1	ST FLOOF	R MEETII	NG ROOM	IS			
REFERENCE	REFERENCE CONDENSER MODEL SERIAL COMPRESSOR CONDENSER FIXED COMP VAR. COMP CONDENSER FAN COMP SUCTION COMP DISCH. SUCTION TEMPERATURE SYSTEM REFRIG. F-GAS REFRIG. ONE SHOT ACID / DISCHARGE SYSTEM REFRIG. F-GAS REFRIG. MOIST. RESULT													
OUTDOOR UNIT	FDC400KXRE6	W402000513F	INV+FIXED	COOLING	0.0 A 3PH	12.3 A 3PH	1.4 A 1PH	6.90 BarG	26.30 BarG	-	-	FULL	PASS	-
	HEATING 0.0 A 3PH 11.9 A 3PH 2.2 A 1PH 8.40 BarG 32.40 BarG N/A N/A FULL													

			1S	T FLOC	R - MEE	ETING RO	OOM 1-A (RIGHT) V	'RV INDO	OR UNI	Т.				
REFERENCE	CURRENT TEMP (C) TEMP - GLG (C) TEMP - HTG (C) CALIBRATION FILTER PROGRAMMING LEAK TEST GAS LEAK TEST														
MEETING RM 1A	928200053P														
	1ST FLOOR - MEETING ROOM 1-B (REAR) VRV INDOOR UNIT.														

				· · ·			0011 ± D (11100	011 01111	•			
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING	FCU F-GAS LEAK TEST	BRANCH BOX F- GAS LEAK TEST
MEETING RM 1B	MITSI HEAVY	FDUM28KXE6D	928200065P K	0.1 A 1PH	24.3 C	13.2 C	31.1 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS
				1ST	FLOOR	- MFFTII	NG ROOM	2 VRV IN	IDOOR U	NIT				

	131 I LOOK - MLLTING ROOM 2 VRV INDOOK ONTI.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN	EVAP AIR ON	EVAP AIR OFF	EVAP AIR OFF	SENSOR	DRAIN	RETURN AIR	ELECTRIC HARNESS	CONTROLLER	FCU F-GAS	BRANCH BOX F-
REFERENCE	MANUFACTURE	MODEL	SLRIAL	CURRENT	TEMP (C)	TEMP - GLG (C)	TEMP - HTG (C)	CALIBRATION	DRAIN	FILTER	ELECTRIC HARNESS	PROGRAMMING	LEAK TEST	GAS LEAK TEST
MEETING DM 2	MITCILLEAVA	EDI MONVECD	928200849P	0.1.4.1011	22.0.0	12.0.0	22 F.C	TECTED OV	TECTED OV	WACHED	CHECKED OK	CENTRAL	DACC	DACC
MEETING RM 2	MITSI HEAVY	FDUM28KXE6D	K	U.1 A 1PH	22.8 C	12.8 C	32.5 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS
	1ST FLOOR - MEETING ROOM 3 VRV INDOOR LINIT													

	ISTILOOK MELTING ROOM S VIV INDOOK ONT.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN	EVAP AIR ON	EVAP AIR OFF	EVAP AIR OFF	SENSOR	DRAIN	RETURN AIR	ELECTRIC HARNESS	CONTROLLER	FCU F-GAS	BRANCH BOX F-
RLIERLINCE	MANUFACTURE	MODEL	SLNIAL	CURRENT	TEMP (C)	TEMP - GLG (C)	TEMP - HTG (C)	CALIBRATION	DRAIN	FILTER	LLLCTRIC HARNESS	PROGRAMMING	LEAK TEST	GAS LEAK TEST
MEETING RM 3	MITSI HEAVY	FDUM28KXE6D	928200122P	0.1 A 1PH	24.3 C	12.9 C	32.1 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS
MELTING KM 3	MITSTILAVI	TOUMZOKALOD	K	U.I A IFII	24.5 C	12.9 C	J2.1 C	ILSILD OK	ILSILD OK	WASHLD	CHECKED OK	CLIVITAL	PASS	PASS
	1CT FLOOD - MEETING DOOM A $V/DV/INDOOD LINIT$													

				151	FLOOR	- MEEIII	NG KOOM	4 VKV IIV	DOOR U	INT I .				
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING	FCU F-GAS LEAK TEST	BRANCH BOX F- GAS LEAK TEST
MEETING RM 4	MITSI HEAVY	FDUM28KXE6D	928200124P K	0.1 A 1PH	22.4 C	11.6 C	29.6 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS

	1ST FLOOR - MEETING ROOM 5 VRV INDOOR UNIT.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING	FCU F-GAS LEAK TEST	BRANCH BOX F- GAS LEAK TEST
MEETING RM 5	MITSI HEAVY	FDUM28KXE6D	928200118P K	0.1 A 1PH	23.2 C	13.2 C	29.5 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS

	1ST FLOOR - MEETING ROOM 6 VRV INDOOR UNIT.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING	FCU F-GAS LEAK TEST	BRANCH BOX F- GAS LEAK TEST
MEETING RM 6	MITSI HEAVY	FDUM28KXE6D	928200199P K	0.1 A 1PH	22.6 C	11.9 C	32.2 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS

	1ST FLOOR - MEETING ROOM 7 VRV INDOOR UNIT.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING	FCU F-GAS LEAK TEST	BRANCH BOX F- GAS LEAK TEST
MEETING RM 7	MITSI HEAVY	FDUM28KXE6D	928200200P K	0.1 A 1PH	20.7 C	10.8 C	29.9 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS
	1ST FLOOR - MEETING ROOM 8 VRV INDOOR UNIT.													

	151 I LOOK MELTING ROOM O VIV INDOOR ONT.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING	FCU F-GAS LEAK TEST	BRANCH BOX F- GAS LEAK TEST
MEETING RM 8	MITSI HEAVY	FDUM45KXE6D	945200631P K	0.1 A 1PH	23.7 C	12.4 C	31.5 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS
	1ST FLOOR - MEETING ROOM 9Δ (FRONT) VRV INDOOR UNIT													

	1ST FLOOR - MEETING ROOM 9A (FRONT) VRV INDOOR UNIT.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING		BRANCH BOX F- GAS LEAK TEST
MEETING RM 9A	945200626P												PASS	
	1CT FLOOD - MEETING DOOM OD (DEAD)V/DV INDOOD UNIT													

	1ST FLOOR - MEETING ROOM 9B (REAR)VRV INDOOR UNIT.													
REFERENCE	MANUFACTURE	MODEL	SERIAL	EVAP FAN CURRENT		EVAP AIR OFF TEMP - GLG (C)	EVAP AIR OFF TEMP - HTG (C)	SENSOR CALIBRATION	DRAIN	RETURN AIR FILTER	ELECTRIC HARNESS	CONTROLLER PROGRAMMING	FCU F-GAS LEAK TEST	BRANCH BOX F- GAS LEAK TEST
MEETING RM 9B	MITSI HEAVY	FDUM45KXE6D	945201892P K	0.1 A 1PH	22.1 C	11.5 C	32.6 C	TESTED OK	TESTED OK	WASHED	CHECKED OK	CENTRAL	PASS	PASS

FAULTS FOUND:

* NO FAULTS TO REPORT

ENGINEER SIGNATURE: ____ CUSTOMERS SIGNATURE: ____ DATE: ____ DATE: ____ DO/01/1900



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720
Fax: +44 (0) 3300884721
info@orlandoaircon.co.uk

DATE: 00/01/1900

PPM REPORT - FCU & CONTROLS

_	I PI IXLI ON	TO A CONTROLS					
	CUSTOMER NAME		SITE CONTACT (OPERATOR RES	PONSIBLE FOR F-GAS COMPLIANCE)		SHEET NUMBER	
	ACL ENGINEERING LT	ΓD	A NAME	-	A POSITION	00000)
	SITE NAME & ADDRESS		ENGINEER	STEVE ORLANDO			
	CRN LTD, BANK HOUS	SE, PRIMOTT RD, STEVENAGE. SG1 3EE	F-GAS QUALIFICATION	CITY & GUILD 2079 PART I			
	REASON FOR VISIT	A VISIT	MANUFACTURER	A MANUFACTURER	MODEL	A MODEL NUMBER	
	JOB NUMBER	A JOB	SERIAL No.	A SERIAL NUMBER	YEAR INSTALLED	01/01/1980	
	PLANT LOCATION	A LOCATION	REFRIGERANT TYPE	R22	QUANTITY (KG)	240.0 KG	
	PLANT REFERENCE	A PLANT REFERENCE	CLG LOAD SERVED	A COOLING LOAD SERVED			
	во	X CODES Y YES N NO G GOOD	F FAIR	P POOR B BAD	N/A NOT APPL	ICABLE	

FCU REF:	FCU MAN	FCU MOD:	FCU SER:	CONTROLLER TYPE	SENSOR CAL & SOFTWARE	TEST FAN SPEEDS	HTG VLV & ACTUATORS	CLG VLV & ACTUATORS	SUPP HTG VLV & ACT (RADS)	FILTER STATUS	TEST DRAIN	FAULTS
	DUNHAM BUSH	F6HBL4	137166	TREND IQ212 & SONTAY	OK / BACKED UP	I / II / III ALL OK	N/A	GOOD / GOOD	GOOD / GOOD	VACUUMED	FAIL	Y
3.2	DUNHAM BUSH	F6HBL4	137166	TREND IQ212 & SONTAY	OK / BACKED UP	I / II / III ALL OK	N/A	GOOD / GOOD	GOOD / GOOD	VACUUMED	FAIL	Y

FAULTS FOUND:			
*1 NO FAULTS			



83 High Street, Hemel Hempstead, Hertfordshire, HP1 3AH. Tele: +44 (0) 3300884720 Fax: +44 (0) 3300884721 info@orlandoaircon.co.uk

YORK ISN CONTROLS PPM

TOTAL TOTAL CONTINUES	• • • •					
CUSTOMER NAME			SITE CONTACT (OPERAT	OR RESPONSIBL	E FOR F-GAS COMPLIANCE)	SHEET NUMBER
ACL ENGINEERING LTD			A NAMI	Ξ	- A POSITION	00000
SITE NAME & ADDRESS (PLANT OWNER F-GAS)			ENGINEER	STEVE	ORLANDO	
CRN LTD, BANK HOUSE, PRIMOTT RD, STEVENAG	GE. SG1 3EE		QUALIFICATION	C&G 20	079 PART 1	
		HARDWARE C	HECKS			
ITEM	OUTSTATION 1	OUTSTATION 2	OUTSTATIO	N 3	OUTSTATION 4	OUTSTATIONS 5, 6 & 7.
MANUFACTURER	YORK	YORK	YORK		YORK	YORK
MODEL	ISN EDC 4800	ISN LDC 17	ISN EDC 4		ISN LDC 17	TDC YT
	13N LDC 4000	13N LDC 17	13N LDC 4	-000	ISN EDC 17	
SERIAL				_		
SOFTWARE VERSION	EDC 4.1	LDC 4.1	EDC 4.	4	LDC 6.6	T6.6Y
NODE NUMBER	01	02	06		99	03 & 04 & 05
LAN NUMBER	00	00	00		00	PORT 2 RS485
IDENTIFIER	THAMES HOUSE	BUSH TOWER	PRINCESS F	IOUSE	SEQUENCER	CHILLER LINCS
CHECK POWER SUPPLIES AND RECORD	OK	OK	OK		ОК	OK, OK, OK
CHECK CONDITION OF FUSES AND REPLACE AS NESSESARY	OK	OK	OK		OK	OK, OK, OK
CHECK CONDITION OF HARNESSES AND RIBBON CABLES	POOR	POOR	POOR		OK	OK, OK, OK
CHECK EPROMS AND MICRO-CHIPS ARE CORRECTLY SEATED	OK	BAD	OK		OK	OK, OK, OK
CHECK BATTERY VOLTAGE AND RECORD	3.5	3.5	3.5		3.5	CAPACITOR
CHECK WATCHDOG OPERATION	OK	FAIL	OK		OK	CAPACITOR
CHECK OPERATION OF KEYPAD, DISPLAY AND AUDABLE ALARM	OK	FAIL	OK		OK	OK, OK, OK
		SOFTWARE CI	HECKS			
CHECK ALARM TABLES FOR ACTIVE ALARMS RECORD AND CLEAR.	OK	FAIL	OK		OK	OK, OK, OK
CHECH TIME AND DATE, CORRECT FOR DAYLIGHT SAVINGS.	OK	FAIL	OK		OK	OK, OK, OK
CHECK ADVISORY ERRORS AND RECORD AND CLEAR.	OK	FAIL	OK		OK	OK, OK, OK
CHECK OPERATION OF ANOLOGUE AND DIGITAL HISTORIES.	OK	FAIL	OK		OK	OK, OK, OK
CHECK PASSWORDS AND RECORD ALL LEVELS.	5555, 8989, 1, 2, 3.	5555, 1, 2.	5555, 1,	3.	5555, 4444, 3333, 2222, 1111	5555, 1, 7396.
BACK UP SOFTWARE	OK	FAIL	OK		OK	OK, OK, OK
CHECK OPERATION OF ALL COMMUNICATION CHANELS.	OK	FAIL	OK		OK	OK, OK, OK
		FIELD INTERI	FACES			
ANOLOG INPUTS. CHECK CALIBRATION OF SENSORS AND RECORD.	OK	FAIL	OK		ОК	N/A
STATUS / PULSE INPUTS. CHECK OPERATION.	OK	FAIL	OK		ОК	N/A
SWITCHED OUTPUTS. CHECK OPERATION.	OK	FAIL	OK		ОК	N/A
MONITORED OUTPUTS. CHECK OPERATION.	N/A	FAIL	N/A		N/A	N/A
MODULATING OUTPUTS. CHECK OPERATION.	OK	FAIL	OK		OK	N/A
* BUSH TOWER CONTROLLER CATASTROFIC FAI	LURE, REPLACEMENT MOTHER B	OARD REQUIRED.				