

# DÜRR

## CHECKOUT / STARTUP / COMMISSIONING PROCEDURES

- » SYSTEM ALARM/OPERATION SIGN-OFF
- » SYSTEM TECHNICAL DATA RECORDS

Dürr Client:	Bombardier
Client Location:	Benton III
Dürr Job Number:	2140

11/95  
PB 22455 FH

**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET**

**DURR CLIENT:** Bombardier  
**LOCATION:** Benton III  
**DURR JOB #:** 2140

SAFETY CHECKLIST	SAFETY FUNCTIONALITY CHECKED		
	CHECKED	INITIALS	DATE
<b>HYDRAULIC SAFETIES</b>			
HYDRAULIC PUMP SUFFICIENT PRESSURE SWITCH	Yes	G. Kupel	5/5/96
HYDRAULIC PUMP MOTOR OVERLOAD	Yes	G. Kupel	5/5/96
HYDRAULIC PRESSURE FILTER DIRTY SWITCH	Yes	G. Kupel	5/5/96
HYDRAULIC RETURN FILTER DIRTY SWITCH	Yes	G. Kupel	5/5/96
HYDRAULIC RESERVOIR LEVEL SWITCH	Yes	G. Kupel	5/5/96
<b>CTO PROCESS DAMPER SAFETIES</b>			
Fresh Air Damper Failed To Open	Yes	G. Kupel	5/5/96
Fresh Air Damper Failed To Close	Yes	G. Kupel	5/5/96
RTO Inlet Damper Failed To Open	Yes	G. Kupel	5/5/96
RTO Inlet Damper Failed To Close	Yes	G. Kupel	5/5/96
Process Supply Damper Failed To Open	Yes	G. Kupel	5/5/96
Process Supply Damper Failed To Close	Yes	G. Kupel	5/5/96
Bypass Damper Failed To Open	Yes	G. Kupel	5/5/96
Bypass Damper Failed To Close	Yes	G. Kupel	5/5/96
<b>CTO TOWER DAMPER SAFETIES</b>			
Damper Sequence Fault	Yes	G. Kupel	5/5/96
Tower #1 Inlet Failed To Open	Yes	G. Kupel	5/5/96
Tower #1 Inlet Failed To Close	Yes	G. Kupel	5/5/96
Tower #1 Exhaust Failed To Open	Yes	G. Kupel	5/5/96
Tower #1 Exhaust Failed To Close	Yes	G. Kupel	5/5/96
Tower #2 Inlet Failed To Open	Yes	G. Kupel	5/5/96
Tower #2 Inlet Failed To Close	Yes	G. Kupel	5/5/96
Tower #2 Exhaust Failed To Open	Yes	G. Kupel	5/5/96
Tower #2 Exhaust Failed To Close	Yes	G. Kupel	5/5/96
<b>BURNER SAFETIES</b>			
High Gas Pressure	Yes	G. Kupel	5/5/96
Low Gas Pressure	Yes	G. Kupel	5/5/96
Flame Failure	Yes	G. Kupel	5/5/96
Combustion Blower OL Tripped	Yes	G. Kupel	5/5/96
Combustion Blower Air Flow Fault	Yes	G. Kupel	5/5/96

ALARM DISPLAY CHECKED		
CHECKED	INITIALS	DATE
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96

**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET**

**DURR CLIENT:** Bombardier  
**LOCATION:** Benton III  
**DURR JOB #:** 2140

SAFETY CHECKLIST	SAFETY FUNCTIONALITY CHECKED		
	CHECKED	INITIALS	DATE
<i>TEMPERATURE SAFETIES</i>			
Oxidizer Below 1400	Yes	G. Kupel	5/5/96
Oxidizer Combustion Chamber Hi-Temperature	Yes	G. Kupel	5/5/96
Oxidizer Exhaust Duct Hi-Temperature	Yes	G. Kupel	5/5/96
	Yes	G. Kupel	5/5/96
<i>FAN SAFETIES</i>			
RTO Supply Fan No Air Flow Path	Yes	G. Kupel	5/5/96
RTO Supply Fan No Air Flow Fault	Yes	G. Kupel	5/5/96
RTO Supply Fan VFD Faulted	Yes	G. Kupel	5/5/96
RTO Supply Fan Excess Suction in Duct	Yes	G. Kupel	5/5/96
RTO Exhaust Fan No Air Flow Path	Yes	G. Kupel	5/5/96
RTO Exhaust Fan No Air Flow Fault	Yes	G. Kupel	5/5/96
RTO Exhaust Fan VFD Faulted	Yes	G. Kupel	5/5/96
RTO Exhaust Fan Excess Suction in Duct	Yes	G. Kupel	5/5/96
<i>CONTROL POWER FAULT</i>	Yes	G. Kupel	5/5/96

ALARM DISPLAY CHECKED		
CHECKED	INITIALS	DATE
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96
Yes	G. Kupel	5/5/96

**ENVIRONMENTAL SYSTEM  
SYSTEM CONFIGURATION & TECHNICAL DATA SHEET**

DURR CLIENT: Bombardier

LOCATION: Benton III

DURR JOB #: 2140

	DESIGN	ACTUAL
	PARAMETERS	CONDITIONS
ELECTRICAL:	480V   3Ø   60Hz	480V   3Ø   60Hz
NATURAL GAS:		
COMPRESSED AIR:	N/A	N/A
<b>SYSTEM CONFIGURATION</b>		
NUMBER OF CHAMBERS:	2	2
VALVE SEQUENCE TIMER SETTING:		70 SEC
VALVE SEQUENCE FAULT TIMER SETTING:		
EXTERNAL EAGLE PURGE TIMER SETTING:		10 MIN
INTERNAL PLC PURGE TIMER SETTING:		10 MIN
INLET (PROCESS) VOLUME / TEMP:		
INLET SOLVENT CONCENTRATION:		
PURGE VOLUME / TEMP:		
EXHAUST VOLUME / TEMP:		
FRESH AIR VOLUME / TEMP:		
<b>AIR STREAM STATIC PRESSURES</b>		
INLET STATIC:		ONLINE   OFFLINE
COMB CHAMBER STATIC (WRT ATMOS):		
EXH DUCT STATIC (WRT ATMOS):		
EXH DUCT STATIC (WRT INLET):		
PRESSURE DROP ACROSS BED#1 (INLT/PRG/OUTLT) :		NO TEST PORTS
PRESSURE DROP ACROSS BED#2 (INLT/PRG/OUTLT) :		NO TEST PORTS
<b>HYDRAULIC PUMP</b>		
PUMP DISCHARGE PRESSURE SETTING:		750 PSIG
DISCHARGE PRESSURE SWITCH SETTING:		550 PSIG
HYDRAULIC FLUID TYPE / MANUFACTURER:		ATF
HYDRAULIC RESERVOIR TEMPERATURE READING:		104 DEG F
RESERVOIR LEVEL SWITCH SETTING:		
<b>RTO DAMPER TIME SETTINGS</b>		
	OPEN   CLOSE	OPEN   CLOSE
CHAMBER #1 INLET:	3 SEC's   3 SEC's	5 SEC   5 SEC
CHAMBER #1 EXHAUST:	3 SEC's   3 SEC's	5 SEC   5 SEC
CHAMBER #2 INLET:	3 SEC's   3 SEC's	5 SEC   5 SEC
CHAMBER #2 EXHAUST:	3 SEC's   3 SEC's	5 SEC   5 SEC
FRESH AIR INLET:		5 SEC   5 SEC
MAIN SOLVENT INLET:		90 SEC   90 SEC
CTO BYPASS:		90 SEC   90 SEC

**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET**

DURR CLIENT: Bombardier  
 LOCATION: Benton ,Ill  
 DURR JOB #: 2140  
 VFD MANF: Emerson Eclipse 4  
 VFD MODEL#: NY801089-003  
 VFD SERIAL#: NY801089-1-01

VFD NAME:	PARAMETER NAME	SETTING
<b>VARIABLE FREQUENCY DRIVE PARAMETERS</b>		
PARAMETER: Speed Reference	Speed Reference Source	Analog Ref # 2
PARAMETER:	Accel Rate	120 Sec
PARAMETER:	Decel Rate	120 Sec
PARAMETER:	Omni view Speed Reference	30 Hz
PARAMETER:	Jog Speed Reference	0 Hz
PARAMETER:	Upper Frequency Limit	60 Hz
PARAMETER:	Min Output Frequency	15 Hz
PARAMETER: Drive Name Plate	Drive Type	Eclipse 4 SMPS
PARAMETER:	Drive Model	6230-8450-480VAC
PARAMETER: Motor Name Plate	Motor HP	200 HP
PARAMETER:	Rated Motor Voltage	480 VAC
PARAMETER:	Base Motor Frequency	60 HZ
PARAMETER:	Rated Motor Current	234 Amps
PARAMETER: V/Hz Curve	Max Mtr Volt (%)	100 %
PARAMETER:	V/Hz Break Voltage	50 %
PARAMETER:	V/Hz Boost Voltage	1.0000 %
PARAMETER:	Min V/Hz Freq	0.0000 %
PARAMETER:	V/Hz Break Frequency	50 %
PARAMETER:	Maximum Motor Frequency	100 %
PARAMETER:	Curve Select	Preprogrammed 1
PARAMETER: I/O Select	Pin 3	run momentary
PARAMETER:	Pin 4	jog
PARAMETER:	Pin 5	fwd /rev
PARAMETER:	Pin 6	stop
PARAMETER:	Pin 9	auto /manual bit 0
PARAMETER:	Pin 10	unused
PARAMETER:	Advanced Set-Up 1	210000000000000000
PARAMETER:	Advanced Set-Up 2	0000124500000000
PARAMETER:	Output Contact 1	Drive Running
PARAMETER:	Output Contact 2	Drive Running
PARAMETER:	OmniView Reference Direction	Reverse Lockout
PARAMETER:	Serial Reference Direction	Reverse Lockout
PARAMETER:	Reference 1 Direction	Reverse Lockout
PARAMETER:	Reference 2 Direction	Reverse Lockout
PARAMETER:	Reference 3 Direction	Reverse Lockout
PARAMETER:	Ref 1 : V at Min F	1.979 → 0.000 Volts
PARAMETER:	Ref 2 : V at Min F	0.000 Volts
PARAMETER:	Ref 3 : V at Min F	0.000 Volts
PARAMETER:	Ref 1 : V at Max F	9.90 → 10.000 Volts
PARAMETER:	Ref 2 : V at Max F	10.000 Volts
PARAMETER:	Ref 3 : V at Max F	10.000 Volts
PARAMETER:	Ref 1: Fltr Bk Frq	12.000 Hz
PARAMETER:	Ref 2: Fltr Bk Frq	12.000 Hz
PARAMETER:	Ref 3: Fltr Bk Frq	12.000 Hz
PARAMETER:	D/A Out 1 Select	Output Voltage
PARAMETER:	D/A Out 2 Slect	Motoring Current
PARAMETER:	Meter Out Select	Output Frequency
PARAMETER:	DA1 V @ 100% Out	9.2 Volts
PARAMETER:	DA2 V @ 100% Out	9.2 Volts
PARAMETER:	Meter Out Gain	0.90
PARAMETER:	Freq ref @ min f	0 kHz
PARAMETER:	Freq ref @ max f	100.0000 kHz

**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET**

DURR CLIENT: Bombardier  
 LOCATION: Benton ,Ill  
 DURR JOB #: 2140  
 VFD MANF: Emerson Eclipse 4  
 VFD MODEL#: NY801089-003  
 VFD SERIAL#: NY801089-1-01

VFD NAME:	PARAMETER NAME	SETTING
<b>VARIABLE FREQUENCY DRIVE PARAMETERS</b>		
PARAMETER:	Freq Ref update	0.986 Sec
PARAMETER:	Comm port setup	RS-422
PARAMETER:	Baud Rate	9600
PARAMETER:	Serial data	8 Data , No Parity
PARAMETER:	Serial RUN ctrl	Disabled
PARAMETER:	Key Pad JOG Function	Disabled
PARAMETER:	Serial FORWARD/REVERSE	Disabled
PARAMETER:	Serial AUTO/MANUAL	Disabled
PARAMETER:	Serial STOP Function	Disabled
PARAMETER: Carrier Setup	Max Carrier	1800
PARAMETER:	Break Carrier	600
PARAMETER:	Min Carrier	200
PARAMETER:	Speed @ Min Carrier	10 Hz
PARAMETER:	Speed @ Brk Carrier	30 Hz
PARAMETER:	Speed @ max Carrier	60 Hz
PARAMETER: Dynamics	Motor I limit	150 %
PARAMETER:	Regen I Limit	150 %
PARAMETER: Drive Features	Braking Mode	Coast to Stop
PARAMETER:	Auto RST Enable	Disabled
PARAMETER:	Flycatcher	Disabled
PARAMETER:	Load Type	Constant Torque
PARAMETER:	Pid Controller	Disabled
PARAMETER:	Startboost Voltage	2.0 %
PARAMETER:	Startboost Delay	3.0 Sec
PARAMETER:	Boost Cutoff Freqeucny	20 Hz
PARAMETER:	IR Compensation	0.0 %
PARAMETER:	Slip ComPensation	0 %
PARAMETER:	DC Braking Time	6.0 Sec
PARAMETER:	DC Braking Current	100 %
PARAMETER:	Spd Reject # 1	0 Hz
PARAMETER:	Spd Reject # 2	0 Hz
PARAMETER:	Spd Reject #3	0 Hz
PARAMETER:	Spd Reject BW # 1	0 Hz
PARAMETER:	Spd Reject BW # 2	0 Hz
PARAMETER:	Spd Reject BW # 3	0 Hz
PARAMETER:	Preset Speed # 1	0 Hz
PARAMETER:	Preset Speed # 2	0 Hz
PARAMETER:	Preset Speed # 3	0 Hz
PARAMETER:	Preset Speed # 4	0 Hz
PARAMETER:	Preset Speed # 5	0 Hz
PARAMETER:	Preset Speed # 6	0 Hz
PARAMETER:	Preset Speed # 7	0 Hz
PARAMETER:	Preset Speed # 8	0 Hz
PARAMETER:	Auto RST Mode	Never
PARAMETER:	Auto RST Window	1 Min
PARAMETER:	Auto Restart Attempt Level	1 Sec
PARAMETER:	Auto Starts / Day	1
PARAMETER:	Reset Power Meter	No
PARAMETER:	Cost per kWh	0.0000 Dollars
PARAMETER:	PID setpt source	
PARAMETER:	Set pt slew rate	1 Sec
PARAMETER:	pid fdbk source	

**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET**

DURR CLIENT: Bombardier  
 LOCATION: Benton ,Ill  
 DURR JOB #: 2140  
 VFD MANF: Emerson Eclipse 4  
 VFD MODEL#: NY801089-003  
 VFD SERIAL#: NY801089-1-01

VFD NAME:	PARAMETER NAME	SETTING
<b>VARIABLE FREQUENCY DRIVE PARAMETERS</b>		
PARAMETER:	PID Control Mode	2
PARAMETER:	PID output mode	
PARAMETER:	PID Prop Gain	10.00%
PARAMETER:	Integ Time Const	10.00 Sec
PARAMETER:	Integ hi limit	100.00 %
PARAMETER:	Integ lo limit	-100 %
PARAMETER:	Diff filtr bk frq	1.00 Hz
PARAMETER:	Differential Gain	.00 Sec
PARAMETER:	PID out Hi Limit	100.00%
PARAMETER:	PID Out Lo Limit	-100.00 %
PARAMETER: Access Code	Set Access Code	0
PARAMETER:	Level 1 code	1011
PARAMETER:	Level 2 code	3156
PARAMETER: Utilities	Last Fault	
PARAMETER:	Fault Chrono-Log	
PARAMETER:	Time Stamp	
PARAMETER:	History Signal 1-8	
PARAMETER:	Control Comands	Stop
PARAMETER:	History Select 1	Target Frequency
PARAMETER:	History Select 2	Output Frequency
PARAMETER:	History Select 3	Output Voltage
PARAMETER:	History Select 4	DC Bus Voltage
PARAMETER:	History Select 5	DC Bus Current
PARAMETER:	History Select 6	Motor Current
PARAMETER:	History Select 7	Power (kW)
PARAMETER:	History Select 8	Carrier Frequency
PARAMETER:	Time	Current Time
PARAMETER:	Date	Current Date
PARAMETER:	Line 1 Display	Drive Name
PARAMETER:	Line 2 Display	Drive Model No.
PARAMETER:	Set Drive ID	1
PARAMETER:	Set Drive Name	Emerson Eclipse
PARAMETER:	Load Deflt & Rst	No
PARAMETER:	Save to EEPROM	No
PARAMETER: Display Builder	Display Signal 1	Output Frequency
PARAMETER:	Display Signal 2	Motor Current
PARAMETER:	Display Scale 1	1.00
PARAMETER:	Display Scale 2	1.00
PARAMETER:	Display Label 1	FREQ
PARAMETER:	Display Label 2	CURR
PARAMETER:	Display Format 1	3.1
PARAMETER:	Display Format 2	3.1
PARAMETER: Chronometers	Drive age	
PARAMETER:	Total Run Time	
PARAMETER:	AC Power On Time	
PARAMETER: Maintenance	Change Filter In ? Hrs	1000000
PARAMETER:	Lube Mtr In ? Hrs	1000000
PARAMETER:		

**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET**

**DURR CLIENT: Bombardier**

**LOCATION: Bento III**

**DURR JOB #: 2140**

<i>NATURAL GAS BURNER SYSTEM</i>	DESIGN	ACTUAL
BURNER CAPACITY (@HI-FIRE):		
NUMBER OF BURNERS:	1	1
BURNER MANUFACTURER:	ECLIPSE	ECLIPSE
BURNER MODEL #:		RM1000
FLAME SAFETY AIR FLOW PROVEN SETTING:		0.8 INCHES WATER
COMBUSTION CHAMBER HI-TEMP LIMIT SETTING:		1800 DEG F
EXHAUST DUCT HI-TEMP LIMIT SETTING:		350 DEG F
FLAME MONITOR TYPE / SIGNAL STRENGTH:		RM7860/ 4.4 VOLTS
MAIN GAS REGULATOR MFGR:		EQUIMETER
MAIN GAS REGULATOR MODEL #:		243
MAIN GAS REGULATOR SETTING:		24 INCHES WATER
PILOT GAS REGULATOR MFGR:		EQUIMETER
PILOT GAS REGULATOR MODEL #:		043
PILOT GAS REGULATOR SETTING:		14 INCHES WATER
LOW GAS PRESSURE SWITCH SETTING:		15 INCHES WATER
HIGH GAS PRESSURE SWITCH SETTING:		35 INCHES WATER
AIR PRESSURE DROP / BURNER (HIFIRE):		
GAS PRESSURE DROP / BURNER (HIFIRE):		5.0 INCHES WATER
AIR PRESSURE DROP / BURNER (LOFIRE):		0.35 INCHES WATER
GAS PRESSURE DROP / BURNER (LOFIRE):		1.0 INCHES WATER
PROFILE PLATE DIFFERENTIAL PRESSURE COLD	N/A	N/A
PROFILE PLATE DIFFERENTIAL PRESSURE HOT	N/A	N/A

<i>DURR ULTRA LOW NOx BURNER</i>	DESIGN	ACTUAL
CORE GAS REGULATOR MFGR:	N/A	
CORE GAS REGULATOR MODEL #:	N/A	
CORE GAS REGULATOR SETTING:	N/A	
CORE BURNER GAS PRESSURE:	N/A	
LOW NOx GAS REGULATOR MFGR:	N/A	
LOW NOx GAS REGULATOR MODEL #:	N/A	
LOW NOx MAIN GAS REGULATOR SETTING:	N/A	
LOW NOx BURNER GAS PRESSURE:	N/A	

<i>FUEL OIL BURNER SYSTEM</i>	DESIGN	ACTUAL
FUEL OIL SUPPLY PRESSURE:	N/A	
FUEL OIL GPM @ LOW FIRE:	N/A	
FUEL OIL GPM @ HIGH FIRE:	N/A	
FUEL OIL BURNER LOW PRESSURE SWITCH SETTING:	N/A	
FUEL OIL ATOMIZING AIR PRESSURE:	N/A	
OIL ATOMIZING AIR LOW PRESSURE SWITCH SETTING:	N/A	



**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET**

**DURR CLIENT: Bombardier**

**LOCATION: Benton III**

**DURR JOB #:2140**

<b>PID NAME: BURNER</b>		<b>SETTING</b>
<b>PID EQUATION VALUES</b>	OPERATING SETPOINT:	1525
	OPERATING MODE:	TIMED
	CONTROL MODE:	SP-PV
	OUTPUT LIMITED:	NO
-454 To 2498	SETPOINT SCALED:	YES
	UPPER Cv LIMIT:	100
	LOWER Cv LIMIT:	0
	DEAD BAND:	0
	FEED FORWARD BIAS:	0
	CONTROLLER GAIN:	500
	RESET TERM:	5
	RATE TERM:	0
	LOOP UPDATE TIME:	1

<b>PID NAME: SUP FAN</b>		<b>SETTING</b>
<b>PID EQUATION VALUES</b>	OPERATING SETPOINT:	-200
	OPERATING MODE:	TIMED
	CONTROL MODE:	SP-PV
	OUTPUT LIMITED:	NO
0 To 1000	SETPOINT SCALED:	YES
	UPPER Cv LIMIT:	100
	LOWER Cv LIMIT:	0
	DEAD BAND:	0
	FEED FORWARD BIAS:	0
	CONTROLLER GAIN:	15
	RESET TERM:	5
	RATE TERM:	0
	LOOP UPDATE TIME:	10

<b>PID NAME: GAS INJ</b>		<b>SETTING</b>
<b>PID EQUATION VALUES</b>	OPERATING SETPOINT:	1525
	OPERATING MODE:	TIMED
	CONTROL MODE:	SP-PV
	OUTPUT LIMITED:	NO
-454 To 2498	SETPOINT SCALED:	YES
	UPPER Cv LIMIT:	100
	LOWER Cv LIMIT:	0
	DEAD BAND:	0
	FEED FORWARD BIAS:	0
	CONTROLLER GAIN:	250
	RESET TERM:	5
	RATE TERM:	0
	LOOP UPDATE TIME:	20

<b>PID NAME:</b>		<b>SETTING</b>
<b>PID EQUATION VALUES</b>	OPERATING SETPOINT:	
	OPERATING MODE:	
	CONTROL MODE:	
	OUTPUT LIMITED:	
	SETPOINT SCALED:	
	UPPER Cv LIMIT:	
	LOWER Cv LIMIT:	
	DEAD BAND:	
	FEED FORWARD BIAS:	
	CONTROLLER GAIN:	
	RESET TERM:	
	RATE TERM:	
	LOOP UPDATE TIME:	

**ENVIRONMENTAL SYSTEM  
SYSTEM OPERATION & CHECKOUT SIGN-OFF SHEET  
DESIGN VS ACTUAL FLOW SCHEMATIC**

DURR CLIENT: \_\_\_\_\_  
 LOCATION: \_\_\_\_\_  
 DURR JOB #: \_\_\_\_\_

		<i>Flow Scfm</i>	<i>Temperature</i>	<i>Static Press.</i>
A	Design			
A	Actual			
B	Design			
B	Actual			
C	Design			
C	Actual			
D	Design			
D	Actual			
E	Design			
E	Actual			
F	Design			
F	Actual			
G	Design			
G	Actual			
H	Design			
H	Actual			
I	Design			
I	Actual			
J	Design			
J	Actual			
K	Design			
K	Actual			
L	Design			
L	Actual			
M	Design			
M	Actual			
N	Design			
N	Actual			

		<i>Flow Scfm</i>	<i>Temperature</i>	<i>Static Press.</i>
O	Design			
O	Actual			
P	Design			
P	Actual			
Q	Design			
Q	Actual			
R	Design			
R	Actual			
S	Design			
S	Actual			

**ENVIRONMENTAL SYSTEM**  
**Rotating Equipment Commissioning Report**

DURR CLIENT: Bombardier  
 LOCATION: Benton III  
 DURR JOB #: 2140  
 Equipment Description: SUPPLY FAN  
 Equipment Number: 402 MTR  
 Field Engineer: Gerald D Kupel

Equipment Name Plate Information				
Manf: Twin City Fan And Blower	Arrangement:	8		
Size: Fan 402	Class:	22		
Serial #:	Type:	BCS-SW		
Motor Sheave # N/A	Motor Bushing #	N/A		
Fan Sheave# N/A	Fan Bushing #	N/A		
Belt # N/A	Number of Belts:	0		
Coupling Type: Falk 1090T10C	Size:			
Design CFM : 40000	Design RPM	1772	Static Pressure ;	18
Motor Name Plate Information				
Manf: SIEMENS	Type:	R62ESD	Model #: 2444000-1	
H.P. 200	Heat Rise:	0 DEG C	RPM: 1785	
Volts: 460	FLA. Amps:	223	Frame Size: 44775	
Serial #: 1LA04474SE42B				
Motor Wired for 460 VAC				
Rotating Equipment Pre-Operation Checks:	YES	NO	N/A	
Fan / Pump Bearings Lubricated	X			
Motor Bearings Lubricated	X			
Bearing Set-Up Checked	X			
Wheel / Impeller Free Of Obstructions and Debris	X			
Ducts Or Piping Clean Of Construction Debris	X			
Operation Of Dampers / Valves Verified	X			
Test Ports / Fittings Installed	X			
Drive Or Coupling Aligned	X			
Belt Tension Checked			X	
Coupling Alignment Numbers (X-Y-Z)				
Equipment Bases Fixed / Slides Installed	X			
Pressure Test Complete				
Differential Pressure / Discharge Pressure Switch Installed	X			
Tachometer Holes Installed		X		
Equipment Guards Installed	X			



**ENVIRONMENTAL SYSTEM**  
**Rotating Equipment Commissioning Report**

DURR CLIENT: Bombardier  
 LOCATION: Benton III  
 DURR JOB #: 2140  
 Equipment Description: COMBUSTION BLOWER  
 Equipment Number: 505MTR  
 Field Engineer: Gerald D Kupel

Equipment Name Plate Information			
Manf:	Arrangement:		
Size:	Class:		
Serial #:	Type:		
Motor Sheave #	Motor Bushing #		
Fan Sheave#	Fan Bushing #		
Belt #	Number of Belts:		
Coupling Type:	Size:		
Design SCFM / GPM:	Design RPM		Static Pressure / Feet of Head:
Motor Name Plate Information			
Manf: BALDOR			Model #: M2394T
H.P. 15	Heat Rise:	40 DEG C	RPM: 3500
Volts: 460	FLA. Amps:	18.5	Frame Size: 254T
Serial #: F895			Type:
Motor Wired for 460	Volt Operation		
Rotating Equipment Pre-Operation Checks:	YES	NO	N/A
Fan / Pump Bearings Lubricated	X		
Motor Bearings Lubricated	X		
Bearing Set-Up Checked			X
Wheel / Impeller Free Of Obstructions and Debris	X		
Ducts Or Piping Clean Of Construction Debris	X		
Operation Of Dampers / Valves Verified			X
Test Ports / Fittings Installed	X		
Drive Or Coupling Aligned	X		
Belt Tension Checked			X
Coupling Alignment Numbers (X-Y-Z)			X
Equipment Bases Fixed / Slides Installed	X		
Pressure Test Complete	X		
Differential Pressure / Discharge Pressure Switch Installed	X		
Tachometer Holes Installed	X		
Equipment Guards Installed	X		



**ENVIRONMENTAL SYSTEM**  
**Rotating Equipment Commissioning Report**

DURR CLIENT: Bombardier  
 LOCATION: Benton III  
 DURR JOB #: 2140  
 Equipment Description: HYDRALIC PUMP  
 Equipment Number: 524MTR  
 Field Engineer: Gerald D Kupel

Equipment Name Plate Information			
Manf: BOSCH	Arrangement:		
Part #: 0513300203	Class:		
Serial #: 569 62111 2608	Type:		
Code : 0513R18C3 VPV16SM14FZAO1	Motor Bushing #		
Fan Sheave#	Fan Bushing #		
Belt #	Number of Belts:		
Coupling Type:	Size:		
Design SCFM / GPM:	Design RPM		Static Pressure / Feet of Head:
Motor Name Plate Information			
Manf: Marathon Electric			Model #: 2VD194T1FR7755AA2
H.P. 5	Heat Rise:		RPM: 1730
Volts: 208/460	FLA. Amps:	14.4 / 6.6	Frame Size: 184TC
Serial #:			Type: TFR
Motor Wired for 460 VAC	Volt Operation		
Rotating Equipment Pre-Operation Checks:	YES	NO	N/A
Fan / Pump Bearings Lubricated	X		
Motor Bearings Lubricated	X		
Bearing Set-Up Checked	X		
Wheel / Impeller Free Of Obstructions and Debris	X		
Ducts Or Piping Clean Of Construction Debris	X		
Operation Of Dampers / Valves Verified			X
Test Ports / Fittings Installed			
Drive Or Coupling Aligned	X		
Belt Tension Checked			X
Coupling Alignment Numbers (X-Y-Z)			
Equipment Bases Fixed / Slides Installed	X		
Pressure Test Complete	X		
Differential Pressure / Discharge Pressure Switch Installed	X		
Tachometer Holes Installed	X		
Equipment Guards Installed	X		

