



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0611

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Caterpillar (CAT)

Manufacturer's Technical Representative: Blake Bennett

Mailing Address: 4955 Marconi Drive, Alpharetta, GA 30005

Telephone: (678) 983-0656

Email: Blake.Bennett@cat.com

Product Information

Product Name: Caterpillar Low Voltage Paralleling Switchgear and Generator Controls

Product Model Number(s): See certified product line matrices

Product Category: Emergency and Standby Power Systems

Product Sub-Category: Paralleling Switchgear Controls

General Description: Switchgear is used for paralleling multiple generators to each other and/or to other sources of incoming power.

Mounting Description: Rigid floor mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: W.E. Gundy & Associates, Inc.

Contact Person: Travis Soppe

Mailing Address: PO Box 9121, Boise, ID 83707

Telephone: (208) 342-5989

Email: tsoppe@wegai.com

Title: President



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: W.E. GUNDY & ASSOCIATES INC.

Name: Travis Soppe California License Number: S6115

Mailing Address: P.O. Box 9121, Boise, ID 83707

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Certification Method

- GR-63-Core
- ICC-ES AC156
- IEEE 344
- IEEE 693
- NEBS 3
- Other (Please Specify): _____

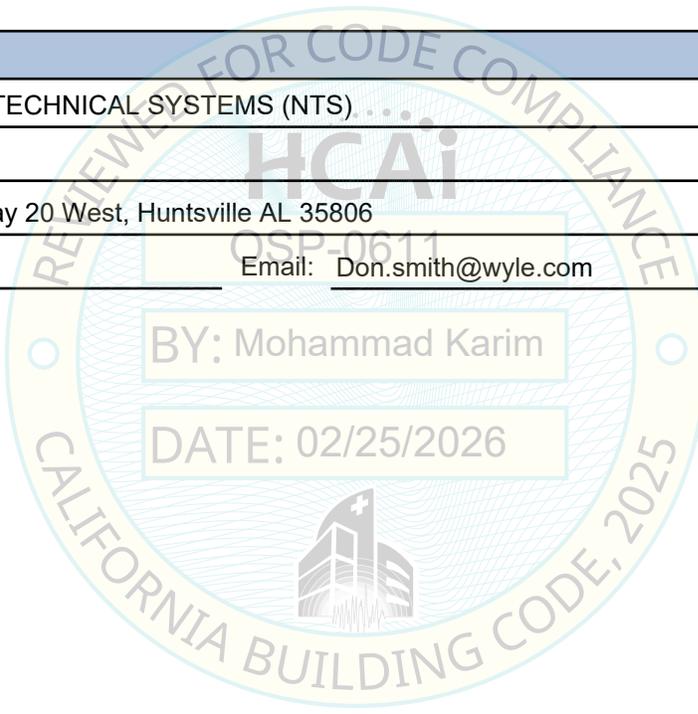
Testing Laboratory

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS) ...

Contact Person: Don Smith

Mailing Address: 7800 Highway 20 West, Huntsville AL 35806

Telephone: (256) 837-4411 Email: Don.smith@wyle.com





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Seismic Parameters

Certified Response Spectral Acceleration Factors:(Fp/Wp)

Horizontal	(A Flx-H), g=	<u>3.84</u>	(A Rig-H), g=	<u>2.58</u>
Vertical	(A Flx-V), g=	<u>1.68</u>	(A Rig-V), g=	<u>0.68</u>

SDS (Design spectral response acceleration at short period, g) = 2.5 @ z/h = 0; 2.4 @ z/h = 1

Hf (Force amplification height factor) = 1.0 @ z/h = 0; 3.5 @ z/h = 1

Ru (Structure ductility reduction factor) = 1.0 @ z/h = 0; 1.3 @ z/h = 1

Ip (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

HCAI Approval (For Office Use Only) - Approval Expires on 02/25/2032

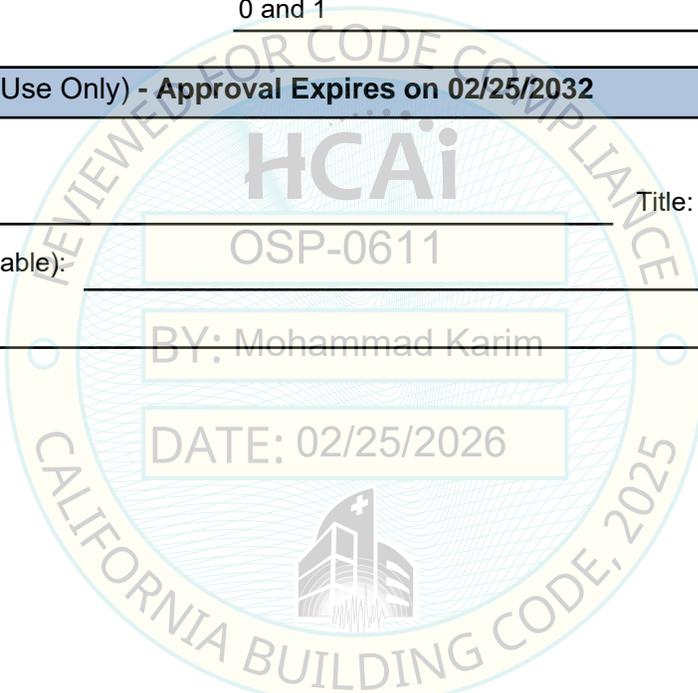
Date: 2/25/2026

Name: Mohammad Karim Title: Supervisor, Health Facilities

Condition of Approval (if applicable): OSP-0611

BY: Mohammad Karim

DATE: 02/25/2026





**CATERPILLAR LV PARALLELING SWITCHGEAR
CERTIFIED PRODUCT LINE MATRIX**

TABLE 1

Identification	Main Bus Rating (A)	NEMA ²	Enclosure Dimensions (in)			Max Weight (lbs)	Max COG (in)	Representative UUT ³
			Width	Depth	Height			
Magnum DS-1600/2000	1600/2000	1	18-20	54-92	96-117	1400	46	interpolated
Magnum DS-1600/2000	1600/2000	1	22-24	54-92	96-117	1700	48	interpolated
Magnum DS-1600/2000	1600/2000	1	26-28	54-92	96-117	2000	50	interpolated
Magnum DS-1600/2000	1600/2000	1	30	54-92	96-117	2200	52	interpolated
Magnum DS-1600/2000	1600/2000	1	30	54-92	96-117	2400	49	interpolated
Magnum DS-2000	2000	1	18	92	96	1433	48	UUT_y-8
Magnum DS-3200	3200	1	18-20	54	96-117	1400	47	interpolated
Magnum DS-3200	3200	1	18-20	54	96-117	1700	42	interpolated
Magnum DS-3200	3200	1	22-24	54	96-117	1700	48	interpolated
Magnum DS-3200	3200	1	22	58	117	998	53	UUT_y-12
Magnum DS-3200	3200	1	22	92	96	1426	46	UUT_y-10
Magnum DS-3200	3200	1	22	58	117	1437	54	UUT_y-11
Magnum DS-3200	3200	1	22	58	99	1475	51	UUT_y-13
Magnum DS-3200	3200	1	22-24	54	96-117	2100	42	interpolated
Magnum DS-3200	3200	1	26-28	54	96-117	2000	50	interpolated
Magnum DS-3200	3200	1	26-28	54	96-117	2400	42	interpolated
Magnum DS-3200	3200	1	30-36	54	96-117	2200	52	interpolated
Magnum DS-3200	3200	1	30-36	54	96-117	3000	38	interpolated
Magnum DS-3200	3200	1	38-44	54	96-117	2700	52	interpolated
Magnum DS-3200	3200	1	38-44	54	96-117	3000	47	interpolated
Magnum DS-4000	4000	1	22	66	96	1395	43	UUT_x-2
Magnum DS-4000	4000	1	22	66	96	1613	50	UUT_x-3

General Notes:

¹ Standalone sections of switchgear are not seismically certified. A minimum of 3 mated sections is required for seismic certification.

² NEMA 1 enclosures are constructed of carbon steel.

³ Subscript indicates the test report in which the units were qualified:

x - PR091398-01TR-Rev.3 / y - 71152R13



**CATERPILLAR LV PARALLELING SWITCHGEAR
CERTIFIED PRODUCT LINE MATRIX**

TABLE 1

Identification	Main Bus Rating (A)	NEMA ²	Enclosure Dimensions (in)			Max Weight (lbs)	Max COG (in)	Representative UUT ³
			Width	Depth	Height			
Magnum DS-4000/5000	4000/5000	1	22-28	54	96-117	1700	48	Interpolated
Magnum DS-4000/5000	4000/5000	1	22-28	54	96-117	2100	42	Interpolated
Magnum DS-4000/5000	4000/5000	1	30-36	54	96-117	2200	52	Interpolated
Magnum DS-4000	4000	1	30	66	96	2478	50	UUT_x-1
Magnum DS-4000/5000	4000/5000	1	30-36	54	96-117	2800	42	Interpolated
Magnum DS-4000/5000	4000/5000	1	38-44	54	96-117	2700	52	Interpolated
Magnum DS-4000/5000	4000/5000	1	38-44	54	96-117	3400	42	Interpolated
Magnum DS-4000/5000	4000/5000	1	46-52	54	96-117	3200	52	Interpolated
Magnum DS-4000/5000	4000/5000	1	46-52	54	96-117	3900	42	Interpolated
Magnum DS-4000/5000	4000/5000	1	54-58	54	96-117	3600	52	Interpolated
Magnum DS-4000/5000	4000/5000	1	54-58	54	96-117	4400	42	Interpolated
Magnum DS-4000/5000	4000/5000	1	60	54	96-117	3900	52	Interpolated
Magnum DS-5000	5000	1	60	58	99	4287	51	UUT_y-14
Magnum DS-4000/5000	4000/5000	1	60	54	96-117	4400	46	Interpolated
Magnum DS-5000	5000	1	60	92	96	4419	48	UUT_y-9

General Notes:

¹ Standalone sections of switchgear are not seismically certified. A minimum of 3 mated sections is required for seismic certification.

² NEMA 1 enclosures are constructed of carbon steel.

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TABLE 2	CATERPILLER LV PARALLELING SWITCHGEAR CERTIFIED SUBCOMPONENT MATRIX			 WEGAI <small>W.E. GUNDY & ASSOCIATES, INC.</small> <small>STRUCTURAL & EARTHQUAKE ENGINEERING</small>
ID/Catalog Number	Manufacturer	Description	Weight (lbs)	Representative UUT ³
Circuit Breakers				
MDSx08/MDNx08/MDSBx08	Eaton	800A, Drawout, Standard, Narrow	145	Interpolated
MDSx16/MDNx16/MDSBx16	Eaton	1600A, Drawout, Standard, Narrow	145	Interpolated
MDSx20/MDNx20/MDSBx20	Eaton	2000A, Drawout, Standard, Narrow	145	Interpolated
MDNC20	Eaton	2000A, Drawout, Standard, Narrow	145	UUT _y -8
MDSx25/MDNx25/MDSBx25	Eaton	2500A, Drawout, Standard, Narrow	145	Interpolated
MDSx32/MDNx32/MDSBx32	Eaton	3200A, Drawout, Standard, Narrow	175	Interpolated
MDSC32	Eaton	3200A, Drawout, Standard, Narrow	175	UUT _y -10, UUT _y -11
MDSC32	Eaton	3200A, Drawout, Standard, Narrow	175	UUT _y -13
MDN64N	Eaton	4000A, Drawout, Double Narrow	310	UUT _x -1
MDSx40/MDSBx40	Eaton	4000A, Drawout, Double, Narrow	310	Interpolated
MDSx50/MDSBx50	Eaton	5000A, Drawout, Double	310	Interpolated
MDSC50	Eaton	5000A, Drawout, Double	310	UUT _y -9 / UUT _y -14
Arc Quenching Device (AQD)				
478C709G01	Eaton	85kA, 635Vac	162	UUT _x -2, UUT _x -3
Control Power Transformers				
114BY38G02	ITI	Size 1-5	30	UUT _y -8, UUT _y -11
114BY38G01-25	ITI	Size 1-5	30-40	Interpolated
114BY38G24	ITI	Size 1-5	40	UUT _y -13
Potential Transformers				
4601B05H16	ITI	Size 150	24	UUT _y -11
475-480	ITI	Size 300	12.5	UUT _y -8
450-480	ITI	Size 750	25	UUT _y -9
9070T500D1	Square D	500VA, 480:120	11.9	UUT _x -2
9070T1000D1	Square D	1000VA, 480:120	21	Interpolated
9070T1500D1	Square D	1500VA, 480:120	35	UUT _x -2
Human Machine Interface (HMI)				
TS-19WS-24VDC-ISO	ELO	19" Touchscreen	10.4	UUT _x -3
Generator Protection System				
Multilin 889	GE	protection, control, management	20.0	UUT _x -3
Metering Components				
PXD-MMG	Eaton	Power Expert Meter	2.0	UUT _y -9, UUT _y -14
PXM2000	Eaton	Power Expert Meter	2.0	UUT _y -13
PXM4000	Eaton	Power Expert Meter	9.0	Interpolated
PXM6000	Eaton	Power Expert Meter	9.0	UUT _y -14
PXM8000	Eaton	Power Expert Meter	9.2	UUT _y -14
General Notes: ³ Subscript indicates the test report in which the units were qualified: x - PR091398-01TR-Rev.3 / y - 71152R13				

TABLE 2	CATERPILLER LV PARALLELING SWITCHGEAR CERTIFIED SUBCOMPONENT MATRIX	 WEGAI <small>W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING</small>
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ID/Catalog Number	Manufacturer	Description	Representative UUT ³
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Generator Controls Components			
007-05GA-PZUL-C7	CROMPTON	Meter Volts 0-15KV	UUT _x -2
007-41LA-RNAN-AN	CROMPTON	Meter Frequency	UUT _x -2
007-146A-PRAE-C6	CROMPTON	Synchoscope Meter 120VAC	UUT _x -2
PPXIITD	BITRONICS	Meter	UUT _x -2
HMIG3U	SCHNEIDER	Magelis 15" TS	UUT _x -2
170 ADM 850 10	MODICON	24VDC 16IN/16OUT Base	UUT _x -2
RH4B-ULD-DC24V	IDEC	4PDT Relay 24VDC IND	UUT _x -2
SH4B-05	IDEC	4PDT Relay Base	UUT _x -2
COMP-TSP-E-01	DYNICS	Touchscreen Processor	UUT _x -2
2904602	PHOENIX	Power Supply - QUINT4, 24VDC, 20A	UUT _x -2
171 CBU 980 91	MODICON	Unity M1E PLC	UUT _x -2
2891001	PHOENIX	Ethernet Switch 5-Port	UUT _x -2
SH2B-05	IDEC	DPDT Relay Base	UUT _x -2
RH2B-UL110-120V	IDEC	DPDT Relay 120VAC IND	UUT _x -2
RH2B-ULD-DC24V	IDEC	DPDT Relay 24VDC IND	UUT _x -2
MB3170	MOXA	Modbus/Ethernet Gateway	UUT _x -2
BMENOE0100	MODICON	Ethernet Module	UUT _x -2
DSPSX00	RED LION	Data Station Plus	UUT _x -2
DNI-UNIKU-E10-B	DYNICS	Remote Access Server	UUT _x -2
XCENET00	RED LION	Ethernet Card	UUT _x -2
M22-K01	EATON	Contact 1-NC	UUT _x -2
BMX-P342-020	MODICON M340	CPU	UUT _x -2
BMX-DRA-1605	MODICON M340	Digital 16-PT Outputs 24VDC	UUT _x -2
BMX-CPS-3020	MODICON	Power Supply 24/48VDC Isolated	UUT _x -2
2891058	PHOENIX	Ethernet Switch 16-PT (Managed)	UUT _x -2
BMX-XBP-0600	MODICON M340	Modicon M340 6-Slot Backplane	UUT _x -2
BMX-AMO-0410	MODICON M340	Analog Output 4-PT Module	UUT _x -2
TSBTBL2USCAT	TOSIBOX	Intelligent Remote Access	UUT _x -2
9575H3T100	EATON	DPDT Relay-24VDV HD	UUT _x -2
171 CBU 980 91	MODICON	Unity M1E PLC	UUT _x -2
170 AMM 110 30	MODICON	2AI 2AO 12DI 8DO 10-45 Base	UUT _x -2
468-480	TTL	Potential XFMR 75VA 480:120	UUT _x -2
9070T500D1	SQUARE D	XFMR 500VA 480:120	UUT _x -2
256-PLDU-PQBX-C7	CROMPTON	25-120VAC With Dead Bus	UUT _x -2
SR3B-05	IDEC	Base Timer Relay	UUT _x -2
TRNB24AD	C-H	Relay Interval Timer 24V	UUT _x -2
534-1-1-202	SPECTROL	POT 2kOHM Speed	UUT _x -2

General Notes:
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TABLE 2	CATERPILLER LV PARALLELING SWITCHGEAR		 WEGAI <small>W.E. GUNDY & ASSOCIATES, INC.</small> <small>STRUCTURAL & EARTHQUAKE ENGINEERING</small>
	CERTIFIED SUBCOMPONENT MATRIX		
RH2B-ULD-DC24V	IDEC	DPDT Relay 24VDC IND	UUT _x -2
SH2B-05	IDEC	DPDT Relay Base	UUT _x -2
MTWDN7CDM500RBO2	BITRONICS	XDUCER Power Plex II	UUT _x -2
9070T1500D1	SQUARE D	Transformer 1500VA 480:120VAC	UUT _x -2
9575H3T100	EATON	DPDT Relay-24VDC HD	UUT _x -2
74902QF	ELECTROSWITCH	Circuit Break Control Switch	UUT _x -3
10250T297LGP24	EATON	Push-To-Test Green	UUT _x -3
10250T297LGP24	EATON	Push-To-Test Red	UUT _x -3
889-E-P5-P5-G5-L-R-N-A-N-N-G-M-S-F-B-SE-N-N-B-N	GE	889 Generator Protection System	UUT _x -3
0700GO1BOX9X74820200	SCHWEITZER	SEL-700G1+	UUT _x -3
7803B	ELECTROSWITCH	86 LOR, 3 CONT-DECK	UUT _x -3
10250T597LRH24-1X	EATON	E-Stop Switch	UUT _x -3
FT-274	GE	Test Switch 10-Pole	UUT _x -3
SC628PR	MALLORY	Horn 24VDC	UUT _x -3
FT-181	GE	Test Switch 10-Pole	UUT _x -3
TS-19WS-24VDC-ISO	ELO	ELO 19" w/s Touchscreen (2094L)	UUT _x -3
BMX-CPS-3020	MODICON	Power Supply 24/48VDC Isolated	UUT _x -3
BMX-H58-2040K	MODICON	Hot Standby Kit W/2 HSBY Processors	UUT _x -3
HMIBSUSND1W01	SCHNEIDER	S-Box PC Universal SSD DC 1SLOT	UUT _x -3
BMX-DDI-1602	MODICON	X80 Discrete DC Input (16) 24VDC Sink	UUT _x -3
BMECRA31210	MODICON	Ethernet Bus and CRA Drop Adaptor	UUT _x -3
BMX-DDO-1602	MODICON M340	16-PT 24VDC Trans Output	UUT _x -3
BMX-FTB-2000	MODICON M340	SCR Removable 20-PT TB	UUT _x -3
BMX-XBP-0600	MODICON M340	Modicon M340 6-Slot Backplane	UUT _x -3
2897253	PHOENIX	16-PT Output Module	UUT _x -3
2703981	PHOENIX	Ethernet TCP/IP Coupler	UUT _x -3
2897156	PHOENIX	16-PT Input Module	UUT _x -3
9X9591	CATERPILLAR	Speed Brick	UUT _x -3

General Notes:

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x - PR091398-01TR-Rev.3 / y - 71152R13

UUT_x-1

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (6) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: NTS, Huntsville AL
Product Line: Low Voltage Paralleling Switchgear	Report Number: PR091398-01TR-Rev3
Matrix Identification: Magnum DS-4000	Test Date: December 11, 2018
Serial Number: L00G7JD-PA01	
UUT Function: Paralleling switchgear provides low voltage circuit protection.	
UUT Description: 4000A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton MDN64N 4000A Breaker and circuit breaker lifting device.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
2,478	30	66	96	50	8.0	6.3	29.6

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	2.40	1.0	3.5	1.30	1.5	3.84	2.58	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_x-2

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (6) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: NTS
Product Line: Low Voltage Paralleling Switchgear	Report Number: PR091398-01TR
Matrix Identification: Magnum DS-4000	Test Date: December 11, 2018
Serial Number: L00G7JD-PA02	

UUT Function: Paralleling switchgear provides low voltage circuit protection.

UUT Description: 4000A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton Arc Quenching Device (478C709G01), Square D PT's (9070T500D1 / 9070T1500D1), and master generator control panel with internal control components to cover varied generator controls offering. See the following page for a list of critical generator control subcomponents within the UUT.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
1,395	22	66	96	43	8.0	6.3	29.6

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	2.40	1.0	3.5	1.30	1.5	3.84	2.58	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

List of Generator Control Subcomponents:

- CROMPTON Meter Volts 0-15KV (007-05GA-PZUL-C7)
- CROMPTON Meter Frequency (007-41LA-RNAN-AN)
- CROMPTON Synchroscope Meter 120VAC (007-146A-PRAE-C6)
- BITRONICS Meter (PPXIITD)
- SCHNEIDER Magelis 15" TS (HMIG3U)
- MODICON 24VDC 16IN/16OUT Base (170 ADM 850 10)
- IDEC 4PDT Relay 24VDC IND (RH4B-ULD-DC24V)
- IDEC 4PDT Relay Base (SH4B-05)
- DYNICS Touchscreen Processor (COMP-TSP-E-01)
- PHOENIX Power Supply - QUINT4, 24VDC, 20A (2904602)
- MODICON Unity M1E PLC (171 CBU 980 91)
- PHOENIX Ethernet Switch 5-Port (2891001)
- IDEC DPDT Relay Base (SH2B-05)
- IDEC DPDT Relay 120VAC IND (RH2B-UL110-120V)
- IDEC DPDT Relay 24VDC IND (RH2B-ULD-DC24V)
- MOXA Modbus/Ethernet Gateway (MB3170)
- MODICON Ethernet Module (BMENOE0100)
- RED LION Data Station Plus (DSPSX00)
- DYNICS Remote Access Server (DNI-UNIKU-E10-B)
- RED LION Ethernet Card (XCENET00)
- EATON Contact 1-NC (M22-K01)
- MODICON M340 CPU (BMX-P342-020)
- MODICON M340 Digital 16-PT Outputs 24VDC (BMX-DRA-1605)
- MODICON Power Supply 24/48VDC Isolated (BMX-CPS-3020)
- PHOENIX Ethernet Switch 16-PT (Managed) (2891058)
- MODICON M340 Modicon M340 6-Slot Backplane (BMX-XBP-0600)
- MODICON M340 Analog Output 4-PT Module (BMX-AMO-0410)
- TOSIBOX Intelligent Remote Access (TSBTBL2USCAT)
- EATON DPDT Relay-24VDV HD (9575H3T100)
- MODICON Unity M1E PLC (171 CBU 980 91)
- MODICON 2AI 2AO 12DI 8DO 10-45 Base (170 AMM 110 30)
- TTL Potential XFMR 75VA 480:120 (468-480)
- SQUARE D XFMR 500VA 480:120 (9070T500D1)
- CROMPTON 25-120VAC With Dead Bus (256-PLDU-PQBX-C7)
- IDEC Base Timer Relay (SR3B-05)
- C-H Relay Interval Timer 24V (TRNB24AD)
- SPECTROL POT 2kOHM Speed (534-1-1-202)
- IDEC DPDT Relay 24VDC IND (RH2B-ULD-DC24V)
- IDEC DPDT Relay Base (SH2B-05)
- BITRONICS XDUCER Power Plex II (MTWDN7CDM500RBO2)
- SQUARE D Transformer 1500VA 480:120VAC (9070T1500D1)
- EATON DPDT Relay-24VDC HD (9575H3T100)

UUT_x-3

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (6) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: NTS
Product Line: Low Voltage Paralleling Switchgear	Report Number: PR091398-01TR
Matrix Identification: Magnum DS-4000	Test Date: December 11, 2018
Serial Number: L00G7JD-PA03	

UUT Function: Paralleling switchgear provides low voltage circuit protection.

UUT Description: 4000A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton Arc Quenching Device (478C709G01), ELO 19" Touch Screen HMI (TS-19WS-24VDC-ISO), GE Protection and Control (Multilin 889), and generator control panel with internal control components to cover varied generator controls offering. See the following page for a list of critical generator control subcomponents within the UUT.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
1,613	22	66	96	50	7.9	6.2	29.6

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	2.40	1.0	3.5	1.30	1.5	3.84	2.58	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

List of Generator Control Subcomponents:

- ELECTROSWITCH Circuit Break Control Switch (74902QF)
- EATON Push-To-Test Green (10250T297LGP24)
- EATON Push-To-Test Red (10250T297LGP24)
- GE 889 Generator Protection System (889-E-P5-P5-G5-L-R-N-A-N-N-G-M-S-F-B-SE-N-N-B-N)
- SCHWEITZER SEL-700G1+ (0700GO1BOX9X74820200)
- ELECTROSWITCH 86 LOR, 3 CONT-DECK (7803B)
- EATON E-Stop Switch (10250T597LRH24-1X)
- GE Test Switch 10-Pole (FT-274)
- MALLORY Horn 24VDC (SC628PR)
- GE Test Switch 10-Pole (FT-181)
- ELO ELO 19" w/s Touchscreen (2094L) (TS-19WS-24VDC-ISO)
- MODICON Power Supply 24/48VDC Isolated (BMX-CPS-3020)
- MODICON Hot Standby Kit W/2 HSBY Processors (BMX-H58-2040K)
- SCHNEIDER S-Box PC Universal SSD DC 1SLOT (HMIBSUSND1W01)
- MODICON X80 Discrete DC Input (16) 24VDC Sink (BMX-DDI-1602)
- MODICON Ethernet Bus and CRA Drop Adaptor (BMECRA31210)
- MODICON M340 16-PT 24VDC Trans Output (BMX-DDO-1602)
- MODICON M340 SCR Removable 20-PT TB (BMX-FTB-2000)
- MODICON M340 Modicon M340 6-Slot Backplane (BMX-XBP-0600)
- PHOENIX 16-PT Output Module (2897253)
- PHOENIX Ethernet TCP/IP Coupler (2703981)
- PHOENIX 16-PT Input Module (2897156)
- CATERPILLAR Speed Brick (9X9591)

UUT_y-8

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (6) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: Wyle Laboratory, Inc.
Product Line: Low Voltage Paralleling Switchgear	Report Number: 71152R13
Matrix Identification: Magnum DS-2000	Test Date: August 26-30, 2013
Serial Number: XL13031-001a	

UUT Function: Paralleling switchgear provides low voltage circuit protection.

UUT Description: 2000A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton 2000A Magnum breaker (MDNC20), ITI Control Power Transformer (114B738G02), and ITI Potential Transformer (475480).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
1,433	18	92	96	48	9.8	8.5	>33

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	3.00	1.0	3.5	1.30	1.5	4.80	2.91	-	-
	3.00	0.0	1.0	1.00	1.5	-	-	2.01	0.81

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-9

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (6) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: Wyle Laboratory, Inc.
Product Line: Low Voltage Paralleling Switchgear	Report Number: 71152R13
Matrix Identification: Magnum DS-5000	Test Date: August 26-30, 2013
Serial Number: XL13031-001b	

UUT Function: Paralleling switchgear provides low voltage circuit protection.

UUT Description: 5000A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton 5000A Magnum breaker (MDSC50), ITI Potential Transformer (450-480), and Eaton Power Xpert Meter (PXD-MMG).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
4,419	60	92	96	48	9.8	8.5	>33

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	3.00	1.0	3.5	1.30	1.5	4.80	2.91	-	-
	3.00	0.0	1.0	1.00	1.5	-	-	2.01	0.81

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-10

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (6) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: Wyle Laboratory, Inc.
Product Line: Low Voltage Paralleling Switchgear	Report Number: 71152R13
Matrix Identification: Magnum DS-3200	Test Date: August 26-30, 2013
Serial Number: XL13031-001c	
UUT Function: Paralleling switchgear provides low voltage circuit protection.	
UUT Description: 3200A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton 3200A Magnum breaker (MDSC32).	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
1,426	22	92	96	46	9.8	8.5	>33

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	3.00	1.0	3.5	1.30	1.5	4.80	2.91	-	-
	3.00	0.0	1.0	1.00	1.5	-	-	2.01	0.81

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-11

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (4) 1/2" diameter grade 5 bolts.



REVIEWED FOR CODE COMPLIANCE
HCAi
 OSP-0611
 BY: Mohammad Karim
 DATE: 02/25/2026

Manufacturer: Caterpillar	Test Location: Wyle Laboratory, Inc.
Product Line: Low Voltage Paralleling Switchgear	Report Number: 71152R13
Matrix Identification: Magnum DS-3200	Test Date: August 26-30, 2013
Serial Number: XL13031-002a	

UUT Function: Paralleling switchgear provides low voltage circuit protection.
UUT Description: 3200A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton 3200A Magnum breaker (MDSC32), ITI Control Power Transformer (114B738G02), and ITI Potential Transformer (4601B05H16).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			COG (inches)	Natural Frequency (Hz)		
	Width	Depth	Height		FB	SS	V
1,437	22	58	117	54	7.0	6.8	20.0

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	3.00	1.0	3.5	1.30	1.5	4.80	2.91	-	-
	3.00	0.0	1.0	1.00	1.5	-	-	2.01	0.81

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

Mounting Details: Floor mounted with (4) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: Wyle Laboratory, Inc.
Product Line: Low Voltage Paralleling Switchgear	Report Number: 71152R13
Matrix Identification: Magnum DS-3200	Test Date: August 26-30, 2013
Serial Number: XL13031-002b	
UUT Function: Paralleling switchgear provides low voltage circuit protection.	
UUT Description: 3200A switchgear section consisting of NEMA 1 carbon steel enclosure.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
998	22	58	117	53	7.0	6.8	20.0

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	3.00	1.0	3.5	1.30	1.5	4.80	2.91	-	-
	3.00	0.0	1.0	1.00	1.5	-	-	2.01	0.81

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-13

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (4) 1/2" diameter grade 5 bolts.



REVIEWED FOR CODE COMPLIANCE
HCAi
 OSP-0611
 BY: Mohammad Karim
 DATE: 02/25/2026

Manufacturer: Caterpillar	Test Location: Wyle Laboratory, Inc.
Product Line: Low Voltage Paralleling Switchgear	Report Number: 71152R13
Matrix Identification: Magnum DS-3200	Test Date: August 26-30, 2013
Serial Number: XL13031-002c	

UUT Function: Paralleling switchgear provides low voltage circuit protection.
UUT Description: 3200A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton 3200A Magnum breaker (MDSC32), ITI Control Power Transformer (114B738G22), and Eaton Power Xpert Meter (PXM2000).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
1,475	22	58	99	51	7.0	6.8	20.0

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	3.00	1.0	3.5	1.30	1.5	4.80	2.91	-	-
	3.00	0.0	1.0	1.00	1.5	-	-	2.01	0.81

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-14

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (8) 1/2" diameter grade 5 bolts.



Manufacturer: Caterpillar	Test Location: Wyle Laboratory, Inc.
Product Line: Low Voltage Paralleling Switchgear	Report Number: 71152R13
Matrix Identification: Magnum DS-5000	Test Date: August 26-30, 2013
Serial Number: XL13031-002d	
UUT Function: Paralleling switchgear provides low voltage circuit protection.	
UUT Description: 3200A switchgear section consisting of NEMA 1 carbon steel enclosure with Eaton 5000A Magnum breaker (MDSC50), and Eaton Power Xpert Meters (PXD-MMG / PXM6000 / PMX8000).	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)		
	Width	Depth	Height	COG	FB	SS	V
4,287	60	58	99	51	7.0	6.8	21.0

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S _{DS} (g)	z / h	H _f	R _μ	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
	3.00	1.0	3.5	1.30	1.5	4.80	2.91	-	-
	3.00	0.0	1.0	1.00	1.5	-	-	2.01	0.81

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.