DOCKETED	
Docket Number:	20-SPPE-03
Project Title:	Gilroy Backup Generating Facility
TN #:	237629
Document Title:	GFGF Caterpillar Use Letter and Caterpillar Specification Sheets
Description:	N/A
Filer:	Scott Galati
Organization:	DayZenLLC
Submitter Role:	Applicant Representative
Submission Date:	5/3/2021 1:19:12 PM
Docketed Date:	5/3/2021

P. O. Box 2128 -- San Leandro, CA 94577
800-963-6446

Mr. Scott A. Galati
DayZen LLC
1720 Park Place Drive
Carmichael, CA 95608

May 3, 2021

RE: Approval of Caterpillar datasheets for public use

Dear Mr. Galati,

In our role as Caterpillar's authorized dealer covering most counties in Northern CA and Oregon we are pleased to share Caterpillar's response here approving public use of Caterpillar's datasheets based upon the following language provided by Cat:

Terms of use within the Legal Notices from the Legal link at the bottom of the Electric Power portion of Cat's website (https://www.cat.com) says that in using the material from our site, users are granted a license for "legitimate internal business purposes and purposes otherwise consistent with our Terms of Use". Full language is set forth below.

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Sincerely, PETERSON POWER SYSTEMS

Robert M. Tanzer, Sales Engineer/Project Mngr

Cat® 3516C
Diesel Generator Sets

Image shown may not reflect actual configuration

Bore – mm (in)	170 (6.69)
Stroke – mm (in)	215 (8.46)
Displacement – L (in^3)	78 (4764.73)
Compression Ratio	14.7:1
Aspiration	TA
Fuel System	EUI
Governor Type	ADEM™ A3

Standby 60 Hz ekW (kVA)	Mission Critical 60 Hz ekW (kVA)	Prime 60 Hz ekW (kVA)	Continuous 60 Hz ekW (kVA)	Emissions Performance
2500 (3125)	2500 (3125)	2250 (2812)	2050 (2562)	U.S. EPA Stationary Emergency Use Only (Tier 2)

Standard Features

Cat® Diesel Engine
- Meets U.S. EPA Stationary Emergency Use Only (Tier 2) emission standards
- Reliable performance proven in thousands of applications worldwide

Generator Set Package
- Accepts 100% block load in one step and meets other NFPA 110 loading requirements
- Conforms to ISO 8528-5 G3 load acceptance requirements
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators
- Superior motor starting capability minimizes need for oversizing generator
- Designed to match performance and output characteristics of Cat diesel engines

Cooling System
- Cooling systems available to operate in ambient temperatures up to 50°C (122°F)
- Tested to ensure proper generator set cooling

EMCP 4 Control Panels
- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements

Warranty
- 24 months/1000-hour warranty for standby and mission critical ratings
- 12 months/unlimited hour warranty for prime and continuous ratings
- Extended service protection is available to provide extended coverage options

Worldwide Product Support
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

Financing
- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

Optional Equipment

Engine

Air Cleaner
- ❑ Single element
- ❑ Dual element

Muffler
- ❑ Industrial grade (15 dB)

Starting
- ❑ Standard batteries
- ❑ Oversized batteries
- ❑ Standard electric starter(s)
- ❑ Heavy duty electric starter(s)
- ❑ Air starter(s)
- ❑ Jacket water heater

Alternator

Output voltage
- ❑ 380V ❑ 6300V
- ❑ 440V ❑ 6600V
- ❑ 480V ❑ 6900V
- ❑ 600V ❑ 12470V
- ❑ 2400V ❑ 13200V
- ❑ 4160V ❑ 13800V

Temperature Rise (over 40°C ambient)
- ❑ 150°C
- ❑ 125°C/130°C
- ❑ 105°C
- ❑ 80°C

Winding type
- ❑ Random wound
- ❑ Form wound

Excitation
- ❑ Internal excitation (IE)
- ❑ Permanent magnet (PM)

Attachments
- ❑ Anti-condensation heater
- ❑ Stator and bearing temperature monitoring and protection

Power Termination

Type
- ❑ Bus bar
- ❑ Circuit breaker
- ❑ 1600A ❑ 2000A
- ❑ 2500A ❑ 3000A
- ❑ 3200A ❑ 4000A
- ❑ 5000A
- ❑ IEC ❑ UL
- ❑ 3-pole ❑ 4-pole
- ❑ Manually operated
- ❑ Electrically operated

Trip Unit
- ❑ LSI ❑ LSI-G
- ❑ LSIG-P

Control System

Controller
- ❑ EMCP 4.2B
- ❑ EMCP 4.3
- ❑ EMCP 4.4

Attachments
- ❑ Local annunciator module
- ❑ Remote annunciator module
- ❑ Expansion I/O module
- ❑ Remote monitoring software

Charging
- ❑ Battery charger – 10A
- ❑ Battery charger – 20A
- ❑ Battery charger – 35A

Vibration Isolators
- ❑ Rubber
- ❑ Spring
- ❑ Seismic rated

Cat Connect

Connectivity
- ❑ Ethernet
- ❑ Cellular
- ❑ Satellite

Extended Service Options

Terms
- ❑ 2 year (prime)
- ❑ 3 year
- ❑ 5 year
- ❑ 10 year

Coverage
- ❑ Silver
- ❑ Gold
- ❑ Platinum
- ❑ Platinum Plus

Ancillary Equipment
- ❑ Automatic transfer switch (ATS)
- ❑ Uninterruptible power supply (UPS)
- ❑ Paralleling switchgear
- ❑ Paralleling controls

Certifications
- ❑ UL2200
- ❑ CSA
- ❑ IBC seismic certification
- ❑ OSHPD pre-approval

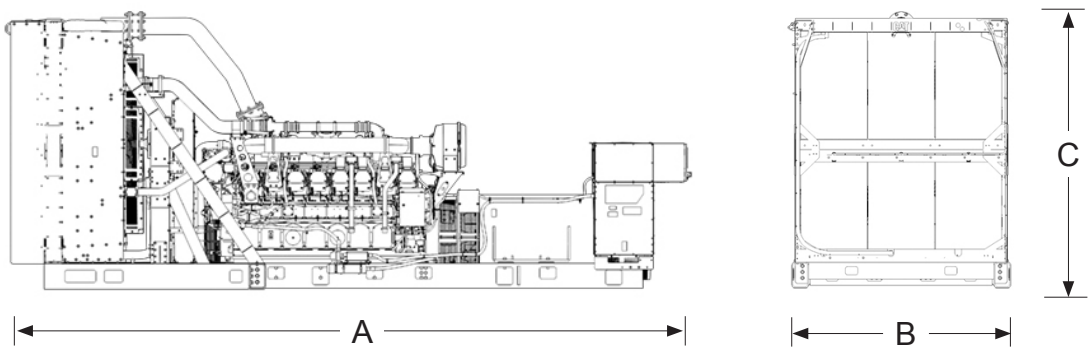
Note: *Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.*

Package Performance

Performance	Standby		Mission Critical		Prime		Continuous	
Frequency	60 Hz		60 Hz		60 Hz		60 Hz	
Gen set power rating with fan	2500 ekW		2500 ekW		2250 ekW		2050 ekW	
Gen set power rating with fan @ 0.8 power factor	3125 kVA		3125 kVA		2812 kVA		2562 kVA	
Emissions	EPA ESE (TIER 2)		EPA ESE (TIER 2)		EPA ESE (TIER 2)		EPA ESE (TIER 2)	
Performance number	EM1894-01		EM1895-02		DM8447-04		DM8268-03	
Fuel Consumption								
100% load with fan – L/hr (gal/hr)	656.8	(175.3)	656.8	(175.3)	593.0	(156.6)	549.3	(145.1)
75% load with fan – L/hr (gal/hr)	510.8	(134.9)	510.8	(134.9)	467.8	(123.6)	435.6	(115.1)
50% load with fan – L/hr (gal/hr)	372.4	(98.4)	372.4	(98.4)	341.9	(90.3)	316.8	(83.7)
25% load with fan – L/hr (gal/hr)	219.3	(57.9)	219.3	(57.9)	203.0	(53.6)	188.9	(49.9)
Cooling System								
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m^3/min (cfm)	2800.0	(98881)	2800.0	(98881)	2800.0	(98881)	2800.0	(98881)
Engine coolant capacity – L (gal)	233.0	(61.6)	233.0	(61.6)	233.0	(61.6)	233.0	(61.6)
Radiator coolant capacity – L (gal)	268.8	(71.0)	268.8	(71.0)	268.8	(71.0)	268.8	(71.0)
Total coolant capacity – L (gal)	501.8	(132.6)	501.8	(132.6)	501.8	(132.6)	501.8	(132.6)
Inlet Air								
Combustion air inlet flow rate – m^3/min (cfm)	242.2	(7212.2)	242.2	(7212.2)	193.1	(6819.8)	183.8	(6491.7)
Exhaust System								
Exhaust stack gas temperature – °C (°F)	490.7	(915.2)	490.7	(915.2)	471.3	(880.4)	463.6	(866.5)
Exhaust gas flow rate – m^3/min (cfm)	554.5	(19578.8)	554.5	(19578.8)	507.9	(17935.1)	476.5	(16826.7)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)
Heat Rejection								
Heat rejection to jacket water – kW (Btu/min)	826	(46992)	826	(46992)	777	(44160)	739	(42021)
Heat rejection to exhaust (total) – kW (Btu/min)	2502	(142265)	2502	(142265)	2243	(127532)	2092	(118949)
Heat rejection to aftercooler – kW (Btu/min)	786	(44723)	786	(44723)	690	(39224)	619	(35176)
Heat rejection to atmosphere from engine – kW (Btu/min)	161	(9146)	161	(9146)	150	(8542)	145	(8229)
Heat rejection from alternator – kW (Btu/min)	121	(6853)	121	(6853)	99	(5607)	94	(5368)
Emissions (Nominal)								
NOx mg/Nm^3 (g/hp-h)	2349.1	(5.32)	2349.1	(5.32)	2206.7	(4.95)	2038.1	(4.62)
CO mg/Nm^3 (g/hp-h)	195.4	(0.42)	195.4	(0.42)	141.2	(0.30)	124.8	(0.27)
HC mg/Nm^3 (g/hp-h)	42.1	(0.10)	42.1	(0.10)	44.4	(0.11)	49.2	(0.12)
PM mg/Nm^3 (g/hp-h)	14.1	(0.04)	14.1	(0.04)	10.9	(0.03)	11.0	(0.03)
Emissions (Potential Site Variation)								
NOx mg/Nm^3 (g/hp-h)	2818.9	(6.38)	2818.9	(6.38)	2648.0	(5.94)	2445.8	(5.55)
CO mg/Nm^3 (g/hp-h)	351.8	(0.76)	351.8	(0.76)	254.2	(0.55)	224.6	(0.49)
HC mg/Nm^3 (g/hp-h)	55.9	(0.14)	55.9	(0.14)	59.1	(0.15)	65.5	(0.16)
PM mg/Nm^3 (g/hp-h)	19.7	(0.05)	19.7	(0.05)	15.2	(0.04)	15.3	(0.04)

3516C Diesel Generator Sets
Electric Power

Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
7495 (295.1)	2569 (101.2)	3009 (118.5)	17 590 (38,780)

Note: *For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.*

Ratings Definitions

Standby
Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Mission Critical
Output available with varying load for the duration of the interruption of the normal source power. Average power output is 85% of the mission critical power rating. Typical peak demand up to 100% of rated power for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Prime
Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Continuous
Output available with non-varying load for an unlimited time. Average power output is 70-100% of the continuous power rating. Typical peak demand is 100% of continuous rated kW for 100% of the operating hours.

Applicable Codes and Standards
AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU.

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

Data Center Applications
Tier III/Tier IV compliant per Uptime Institute requirements. ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

Fuel Rates
Fuel rates are based on fuel oil of 35º API [16°C (60ºF)] gravity having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 29ºC (85ºF) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.)

www.cat.com/electricpower

3516 PGFL
LEHE1377-00 (8-17)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2020 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Caterpillar Inc.**
(U.S. Manufacturer or Importer)

Certificate Number: LCPXL78.1NZS-022

Effective Date: 07/25/2019

Expiration Date: 12/31/2020

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 07/25/2019

Revision Date: N/A

Model Year: 2020
Manufacturer Type: Original Engine Manufacturer
Engine Family: LCPXL78.1NZS

Mobile/Stationary Indicator: Stationary
Emissions Power Category: kW>560
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Electronic Control, Engine Design Modification

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

PERFORMANCE DATA[EM1894]

May 14, 2020

Performance Number: EM1894 **Change Level: 04**

SALES MODEL:	3516C	**COMBUSTION:**	DIRECT INJECTION
BRAND:	CAT	**ENGINE SPEED (RPM):**	1,800
ENGINE POWER (BHP):	3,634	**HERTZ:**	60
GEN POWER WITH FAN (EKW):	2,500.0	**FAN POWER (HP):**	130.1
COMPRESSION RATIO:	14.7	**ASPIRATION:**	TA
RATING LEVEL:	STANDBY	**AFTERCOOLER TYPE:**	ATAAC
PUMP QUANTITY:	1	**AFTERCOOLER CIRCUIT TYPE:**	JW+OC, ATAAC
FUEL TYPE:	DIESEL	**INLET MANIFOLD AIR TEMP (F):**	122
MANIFOLD TYPE:	DRY	**JACKET WATER TEMP (F):**	219.2
GOVERNOR TYPE:	ADEM3	**TURBO CONFIGURATION:**	PARALLEL
ELECTRONICS TYPE:	ADEM3	**TURBO QUANTITY:**	4
CAMSHAFT TYPE:	STANDARD	**TURBOCHARGER MODEL:**	GT6041BN-48T-1.10
IGNITION TYPE:	CI	**CERTIFICATION YEAR:**	2006
INJECTOR TYPE:	EUI	**CRANKCASE BLOWBY RATE (FT3/HR):**	3,619.4
FUEL INJECTOR:	3920221	**FUEL RATE (RATED RPM) NO LOAD (GAL/HR):**	16.0
UNIT INJECTOR TIMING (IN):	64.34	**PISTON SPD @ RATED ENG SPD (FT/MIN):**	2,539.4
REF EXH STACK DIAMETER (IN):	12		
MAX OPERATING ALTITUDE (FT):	2,953		

INDUSTRY	SUBINDUSTRY	APPLICATION
ELECTRIC POWER	STANDARD	PACKAGED GENSET
OIL AND GAS	LAND PRODUCTION	PACKAGED GENSET

General Performance Data

THIS STANDBY RATING IS FOR A STANDBY ONLY ENGINE ARRANGEMENT. RERATING THE ENGINE TO A PRIME OR CONTINUOUS RATING IS NOT PERMITTED.

THE INLET MANIFOLD AIR TEMP LISTED IN THE HEADER, AND IN THE GENERAL PERFORMANCE DATA, IS THE AVERAGE INLET MANIFOLD TEMP FRONT TO REAR ON THE ENGINE.

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP
EKW	%	BHP	PSI	LB/BHP-HR	GAL/HR	IN-HG	DEG F	DEG F	IN-HG	DEG F
2,500.0	100	3,633	336	0.334	171.3	78.1	121.9	1,235.6	67.6	915.2
2,250.0	90	3,283	303	0.335	155.1	71.3	119.4	1,190.0	61.3	881.2
2,000.0	80	2,935	271	0.339	140.4	64.3	116.9	1,158.9	55.3	864.0
1,875.0	75	2,760	255	0.342	133.2	60.7	115.8	1,145.6	52.3	858.5
1,750.0	70	2,586	239	0.346	125.9	57.0	114.7	1,133.3	49.3	854.6
1,500.0	60	2,237	207	0.354	111.5	49.5	112.7	1,112.4	43.2	851.2
1,250.0	50	1,889	174	0.365	97.1	41.3	111.0	1,091.8	36.8	850.7
1,000.0	40	1,547	143	0.373	81.4	31.4	109.4	1,061.5	29.3	856.6
750.0	30	1,203	111	0.385	65.3	21.7	107.9	1,010.3	22.1	848.2
625.0	25	1,029	95	0.394	57.2	17.2	107.2	968.3	18.7	831.1
500.0	20	854	79	0.403	48.6	12.7	106.4	902.0	15.5	796.1
250.0	10	497	46	0.441	30.9	4.8	104.1	700.7	9.8	647.3

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	WET EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)	DRY EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)
EKW	%	BHP	IN-HG	DEG F	CFM	CFM	LB/HR	LB/HR	FT3/MIN	FT3/MIN
2,500.0	100	3,633	85	466.7	7,212.2	19,578.8	32,046.3	33,260.4	7,001.7	6,362.4
2,250.0	90	3,283	78	443.0	6,831.8	17,980.7	30,219.3	31,318.8	6,593.0	6,013.7
2,000.0	80	2,935	70	417.8	6,404.5	16,560.6	28,284.6	29,277.2	6,151.5	5,625.4
1,875.0	75	2,760	66	404.7	6,173.3	15,893.2	27,261.3	28,202.4	5,928.1	5,427.1
1,750.0	70	2,586	63	391.2	5,929.9	15,232.6	26,196.0	27,086.8	5,698.4	5,222.0
1,500.0	60	2,237	55	363.5	5,411.9	13,879.0	23,947.5	24,739.5	5,205.5	4,779.1
1,250.0	50	1,889	46	334.6	4,843.3	12,413.0	21,444.3	22,133.2	4,657.5	4,283.2
1,000.0	40	1,547	36	297.5	4,121.4	10,609.5	18,262.0	18,840.0	3,963.0	3,647.2
750.0	30	1,203	25	249.8	3,423.0	8,763.8	15,175.3	15,640.3	3,294.6	3,037.8
625.0	25	1,029	21	223.4	3,104.6	7,844.6	13,765.1	14,171.8	2,988.1	2,760.8
500.0	20	854	16	197.2	2,791.2	6,823.5	12,376.2	12,722.2	2,671.7	2,476.1
250.0	10	497	7	152.3	2,237.9	4,800.2	9,917.6	10,136.8	2,132.0	1,999.8

PERFORMANCE DATA[EM1894]

Heat Rejection Data

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	REJECTION TO JACKET WATER	REJECTION TO ATMOSPHERE	REJECTION TO EXH	EXHAUST RECOVERY TO 350F	FROM OIL COOLER	FROM AFTERCOOLER	WORK ENERGY	LOW HEAT VALUE ENERGY	HIGH HEAT VALUE ENERGY
EKW	%	BHP	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN
2,500.0	100	3,633	46,992	9,146	142,265	79,907	19,835	44,723	154,077	372,403	396,702
2,250.0	90	3,283	44,242	8,557	127,929	70,449	17,960	39,380	139,243	337,204	359,207
2,000.0	80	2,935	41,477	8,162	116,879	63,561	16,262	34,167	124,444	305,311	325,233
1,875.0	75	2,760	40,076	8,007	111,588	60,518	15,425	31,612	117,053	289,608	308,505
1,750.0	70	2,586	38,657	7,874	106,293	57,637	14,588	29,085	109,651	273,881	291,752
1,500.0	60	2,237	35,755	7,684	95,729	52,220	12,915	24,201	94,874	242,485	258,307
1,250.0	50	1,889	32,626	7,527	85,184	46,626	11,245	19,401	80,109	211,118	224,893
1,000.0	40	1,547	29,235	7,262	72,693	40,153	9,427	13,873	65,583	176,995	188,544
750.0	30	1,203	25,476	6,784	59,425	32,726	7,565	8,706	51,005	142,037	151,305
625.0	25	1,029	23,394	6,435	52,542	28,568	6,621	6,496	43,653	124,317	132,429
500.0	20	854	21,006	5,995	44,739	23,683	5,624	4,534	36,223	105,594	112,484
250.0	10	497	15,737	5,026	27,795	12,371	3,578	1,916	21,071	67,181	71,564

Sound Data

SOUND PRESSURE DATA FOR THIS RATING CAN BE FOUND IN PERFORMANCE NUMBER - DM8779.

Emissions Data

RATED SPEED POTENTIAL SITE VARIATION: 1800 RPM

GENSET POWER WITH FAN		EKW	2,500.0	1,875.0	1,250.0	625.0	250.0
PERCENT LOAD		%	100	75	50	25	10
ENGINE POWER		BHP	3,633	2,760	1,889	1,029	497
TOTAL NOX (AS NO2)		G/HR	22,948	14,101	7,004	3,568	3,185
TOTAL CO		G/HR	2,726	1,304	1,092	1,496	2,098
TOTAL HC		G/HR	500	499	543	408	437
PART MATTER		G/HR	185.5	123.7	132.1	139.5	141.0
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	2,818.9	2,229.5	1,544.3	1,352.7	2,230.2
TOTAL CO	(CORR 5% O2)	MG/NM3	351.8	213.9	252.3	594.6	1,552.7
TOTAL HC	(CORR 5% O2)	MG/NM3	55.9	72.8	108.8	140.7	282.4
PART MATTER	(CORR 5% O2)	MG/NM3	19.7	16.5	25.8	48.5	88.2
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	1,373	1,086	752	659	1,086
TOTAL CO	(CORR 5% O2)	PPM	281	171	202	476	1,242
TOTAL HC	(CORR 5% O2)	PPM	104	136	203	263	527
TOTAL NOX (AS NO2)		G/HP-HR	6.38	5.15	3.74	3.50	6.47
TOTAL CO		G/HP-HR	0.76	0.48	0.58	1.47	4.26
TOTAL HC		G/HP-HR	0.14	0.18	0.29	0.40	0.89
PART MATTER		G/HP-HR	0.05	0.05	0.07	0.14	0.29
TOTAL NOX (AS NO2)		LB/HR	50.59	31.09	15.44	7.87	7.02
TOTAL CO		LB/HR	6.01	2.88	2.41	3.30	4.62
TOTAL HC		LB/HR	1.10	1.10	1.20	0.90	0.96
PART MATTER		LB/HR	0.41	0.27	0.29	0.31	0.31

RATED SPEED NOMINAL DATA: 1800 RPM

GENSET POWER WITH FAN		EKW	2,500.0	1,875.0	1,250.0	625.0	250.0
PERCENT LOAD		%	100	75	50	25	10
ENGINE POWER		BHP	3,633	2,760	1,889	1,029	497
TOTAL NOX (AS NO2)		G/HR	19,123	11,751	5,837	2,974	2,654
TOTAL CO		G/HR	1,515	725	607	831	1,165
TOTAL HC		G/HR	376	375	408	307	329
TOTAL CO2		KG/HR	1,740	1,340	966	559	296
PART MATTER		G/HR	132.5	88.4	94.3	99.6	100.7
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	2,349.1	1,857.9	1,286.9	1,127.3	1,858.5
TOTAL CO	(CORR 5% O2)	MG/NM3	195.4	118.8	140.1	330.3	862.6
TOTAL HC	(CORR 5% O2)	MG/NM3	42.1	54.8	81.8	105.8	212.3
PART MATTER	(CORR 5% O2)	MG/NM3	14.1	11.8	18.4	34.7	63.0
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	1,144	905	627	549	905

PERFORMANCE DATA[EM1894]

TOTAL CO	(CORR 5% O2)	PPM	156	95	112	264	690
TOTAL HC	(CORR 5% O2)	PPM	79	102	153	197	396
TOTAL NOX (AS NO2)		G/HP-HR	5.32	4.30	3.12	2.92	5.39
TOTAL CO		G/HP-HR	0.42	0.26	0.32	0.82	2.37
TOTAL HC		G/HP-HR	0.10	0.14	0.22	0.30	0.67
PART MATTER		G/HP-HR	0.04	0.03	0.05	0.10	0.20
TOTAL NOX (AS NO2)		LB/HR	42.16	25.91	12.87	6.56	5.85
TOTAL CO		LB/HR	3.34	1.60	1.34	1.83	2.57
TOTAL HC		LB/HR	0.83	0.83	0.90	0.68	0.72
TOTAL CO2		LB/HR	3,836	2,955	2,130	1,233	654
PART MATTER		LB/HR	0.29	0.19	0.21	0.22	0.22
OXYGEN IN EXH		%	9.4	10.4	11.3	12.2	14.4
DRY SMOKE OPACITY		%	1.7	1.4	1.9	2.6	4.0
BOSCH SMOKE NUMBER			0.58	0.49	0.62	0.92	1.27

Regulatory Information

EPA EMERGENCY STATIONARY		**2011 - ----**		
GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 60 SUBPART IIII AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE EMERGENCY STATIONARY REGULATIONS.				
Locality	**Agency**	**Regulation**	**Tier/Stage**	**Max Limits - G/BKW - HR**
U.S. (INCL CALIF)	EPA	STATIONARY	EMERGENCY STATIONARY	CO: 3.5 NOx + HC: 6.4 PM: 0.20

Altitude Derate Data

ALTITUDE CORRECTED POWER CAPABILITY (BHP)

AMBIENT OPERATING TEMP (F)	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**110**	**120**	**NORMAL**
ALTITUDE (FT)											
0	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634
1,000	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,561	3,634
2,000	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,604	3,541	3,480	3,634
3,000	3,628	3,628	3,628	3,628	3,628	3,603	3,537	3,474	3,413	3,354	3,628
4,000	3,504	3,504	3,504	3,504	3,504	3,471	3,408	3,347	3,289	3,232	3,504
5,000	3,384	3,384	3,384	3,384	3,384	3,344	3,283	3,225	3,168	3,113	3,384
6,000	3,269	3,269	3,269	3,269	3,269	3,221	3,162	3,105	3,051	2,998	3,269
7,000	3,159	3,159	3,159	3,159	3,159	3,101	3,044	2,990	2,937	2,887	3,159
8,000	3,052	3,052	3,052	3,052	3,041	2,985	2,930	2,878	2,827	2,779	3,052
9,000	2,950	2,950	2,950	2,950	2,926	2,872	2,820	2,769	2,721	2,674	2,950
10,000	2,851	2,851	2,851	2,851	2,815	2,763	2,713	2,664	2,617	2,544	2,851

Cross Reference

Test Spec	**Setting**	**Engine Arrangement**	**Engineering Model**	**Engineering Model Version**	**Start Effective Serial Number**	**End Effective Serial Number**
4577175	LL1857	5084280	GS336	-	SBK02483	
4581566	LL6759	5157721	PG243	-	LYM00001	

Supplementary Data

Type	**Classification**	**Performance Number**
SOUND	SOUND PRESSURE	DM8779

Performance Parameter Reference

Parameters Reference:DM9600-11

PERFORMANCE DEFINITIONS

PERFORMANCE DEFINITIONS DM9600
APPLICATION:
Engine performance tolerance values below are representative of a typical production engine tested in a calibrated dynamometer test cell at SAE J1995 standard reference conditions. Caterpillar maintains ISO9001:2000 certified quality management systems for engine test Facilities to assure accurate calibration of test equipment. Engine test data is corrected in accordance with SAE J1995. Additional reference material SAE J1228, J1349, ISO 8665, 3046-1:2002E, 3046-3:1989, 1585, 2534, 2288, and 9249 may apply in part or are similar to SAE J1995. Special engine rating request (SERR) test data shall be noted.
PERFORMANCE PARAMETER TOLERANCE FACTORS:
Power +/- 3%
Torque +/- 3%
Exhaust stack temperature +/- 8%
Inlet airflow +/- 5%
Intake manifold pressure-gage +/- 10%
Exhaust flow +/- 6%
Specific fuel consumption +/- 3%
Fuel rate +/- 5%
Specific DEF consumption +/- 3%
DEF rate +/- 5%
Heat rejection +/- 5%
Heat rejection exhaust only +/- 10%
Heat rejection CEM only +/- 10%
Heat Rejection values based on using treated water.
Torque is included for truck and industrial applications, do not use for Gen Set or steady state applications.
On C7 - C18 engines, at speeds of 1100 RPM and under these values are provided for reference only, and may not meet the tolerance listed.
These values do not apply to C280/3600. For these models, see the tolerances listed below.
C280/3600 HEAT REJECTION TOLERANCE FACTORS:
Heat rejection +/- 10%
Heat rejection to Atmosphere +/- 50%
Heat rejection to Lube Oil +/- 20%
Heat rejection to Aftercooler +/- 5%
TEST CELL TRANSDUCER TOLERANCE FACTORS:
Torque +/- 0.5%
Speed +/- 0.2%
Fuel flow +/- 1.0%
Temperature +/- 2.0 C degrees
Intake manifold pressure +/- 0.1 kPa
OBSERVED ENGINE PERFORMANCE IS CORRECTED TO SAE J1995 REFERENCE AIR AND FUEL CONDITIONS.
REFERENCE ATMOSPHERIC INLET AIR
FOR 3500 ENGINES AND SMALLER
SAE J1228 AUG2002 for marine engines, and J1995 JAN2014 for other engines, reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity at the stated aftercooler water temp, or inlet manifold temp.
FOR 3600 ENGINES
Engine rating obtained and presented in accordance with ISO 3046/1 and SAE J1995 JANJAN2014 reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity and 150M altitude at the stated aftercooler water temperature.
MEASUREMENT LOCATION FOR INLET AIR TEMPERATURE
Location for air temperature measurement air cleaner inlet at stabilized operating conditions.
REFERENCE EXHAUST STACK DIAMETER
The Reference Exhaust Stack Diameter published with this dataset is only used for the calculation of Smoke Opacity values displayed in this dataset. This value does not necessarily represent the actual stack diameter of the engine due to the variety of exhaust stack adapter options available. Consult the price list, engine order or general dimension drawings for the actual stack diameter size ordered or options available.
REFERENCE FUEL
DIESEL
Reference fuel is #2 distillate diesel with a 35API gravity;
A lower heating value is 42,780 KJ/KG (18,390 BTU/LB) when used at 29 deg C (84.2 deg F), where the density is 838.9 G/Liter (7.001 Lbs/Gal).
GAS
Reference natural gas fuel has a lower heating value of 33.74 KJ/L (905 BTU/CU Ft). Low BTU ratings are based on 18.64 KJ/L (500 BTU/CU FT) lower heating value gas. Propane ratings are based on 87.56 KJ/L (2350 BTU/CU Ft) lower heating value gas.

PERFORMANCE DATA[EM1894]

ENGINE POWER (NET) IS THE CORRECTED FLYWHEEL POWER (GROSS) LESS EXTERNAL AUXILIARY LOAD

Engine corrected gross output includes the power required to drive standard equipment; lube oil, scavenge lube oil, fuel transfer, common rail fuel, separate circuit aftercooler and jacket water pumps. Engine net power available for the external (flywheel) load is calculated by subtracting the sum of auxiliary load from the corrected gross flywheel out put power. Typical auxiliary loads are radiator cooling fans, hydraulic pumps, air compressors and battery charging alternators. For Tier 4 ratings additional Parasitic losses would also include Intake, and Exhaust Restrictions.

ALTITUDE CAPABILITY

Altitude capability is the maximum altitude above sea level at standard temperature and standard pressure at which the engine could develop full rated output power on the current performance data set.

Standard temperature values versus altitude could be seen on TM2001.

When viewing the altitude capability chart the ambient temperature is the inlet air temp at the compressor inlet.

Engines with ADEM MEUI and HEUI fuel systems operating at conditions above the defined altitude capability derate for atmospheric pressure and temperature conditions outside the values defined, see TM2001.

Mechanical governor controlled unit injector engines require a setting change for operation at conditions above the altitude defined on the engine performance sheet. See your Caterpillar technical representative for non standard ratings.

REGULATIONS AND PRODUCT COMPLIANCE

TMI Emissions information is presented at 'nominal' and 'Potential Site Variation' values for standard ratings. No tolerances are applied to the emissions data. These values are subject to change at any time. The controlling federal and local emission requirements need to be verified by your Caterpillar technical representative.

Customer's may have special emission site requirements that need to be verified by the Caterpillar Product Group engineer.

EMISSION CYCLE LIMITS:

Cycle emissions Max Limits apply to cycle-weighted averages only. Emissions at individual load points may exceed the cycle-weighted limit.

EMISSIONS DEFINITIONS:

Emissions : DM1176

EMISSION CYCLE DEFINITIONS

1. For constant-speed marine engines for ship main propulsion, including,diesel-electric drive, test cycle E2 shall be applied, for controllable-pitch propeller sets
test cycle E2 shall be applied.
2. For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied.
3. For constant-speed auxiliary engines test cycle D2 shall be applied.
4. For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

HEAT REJECTION DEFINITIONS:

Diesel Circuit Type and HHV Balance : DM9500

HIGH DISPLACEMENT (HD) DEFINITIONS:

3500: EM1500

RATING DEFINITIONS:

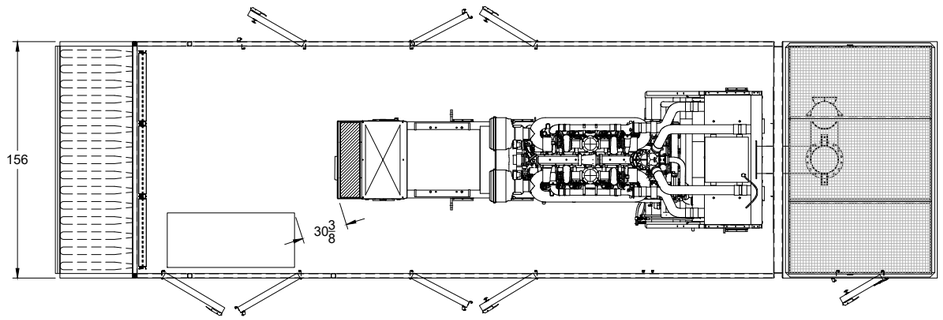
Agriculture : TM6008
Fire Pump : TM6009
Generator Set : TM6035
Generator (Gas) : TM6041
Industrial Diesel : TM6010
Industrial (Gas) : TM6040
Irrigation : TM5749
Locomotive : TM6037
Marine Auxiliary : TM6036
Marine Prop (Except 3600) : TM5747
Marine Prop (3600 only) : TM5748
MSHA : TM6042
Oil Field (Petroleum) : TM6011
Off-Highway Truck : TM6039
On-Highway Truck : TM6038

SOUND DEFINITIONS:

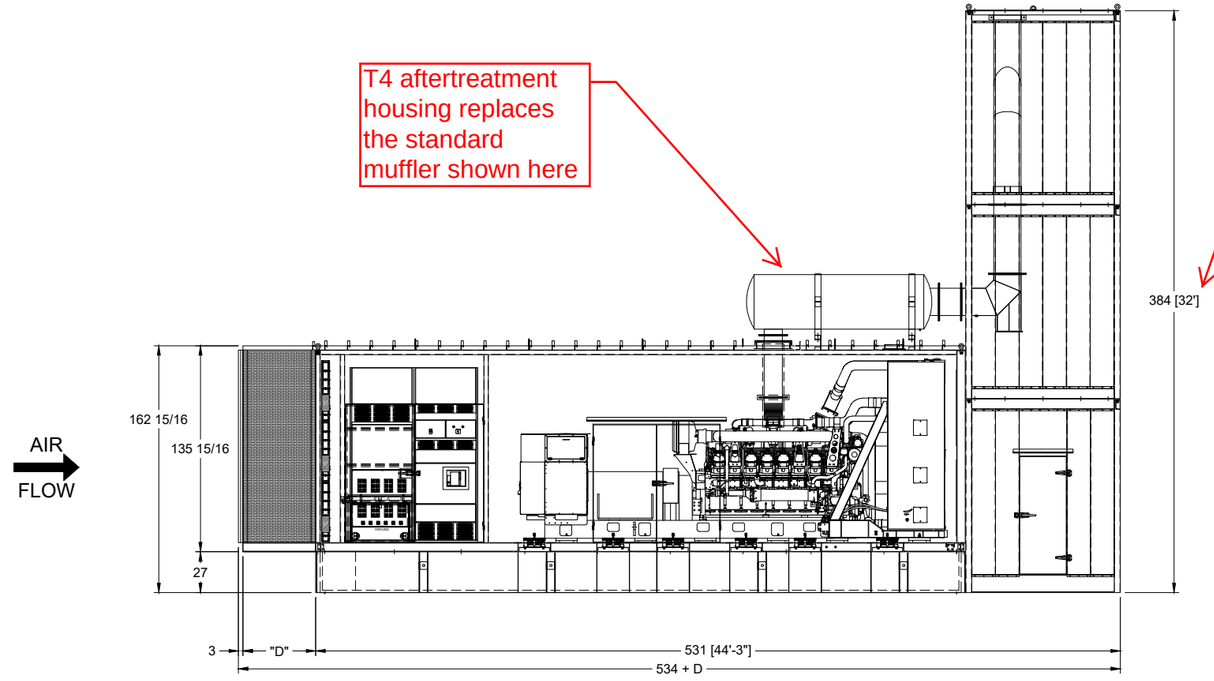
Sound Power : DM8702
Sound Pressure : TM7080
Date Released : 07/10/19

REMOVABLE SOUND PLENUM OPTIONS

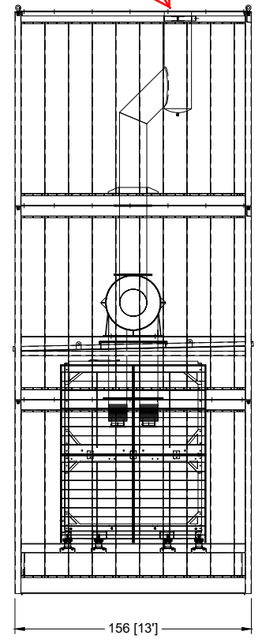
D =	Sound option
None	No sound Option
18"	85 dba
30"	75 dba
48"	65 dba



TOP VIEW



SIDE VIEW



END VIEW

1 GENERAL ASSEMBLY: 32' TOWER
SCALE = 1 : 100

JOHNSON THERMAL SYSTEMS

REV:	DATE:	BY:	DESCRIPTION:
CO	01-19-21	SC	ISSUED FOR CONCEPTUAL

APP BY: SC DATE: 01-19-21

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DRAWN BY: SC	DATE: 01-09-21
CHECKED BY: SC	DATE: 01-09-21
APPROVED BY: SC	DATE: 01-09-21

PROJECT NAME: OPTDC ONE DESIGN

PROJECT LOCATION: ---

CLIENT NAME: ---

QUOTE NUMBER: Q-2948-1

CUSTOMER PO NUMBER: ---

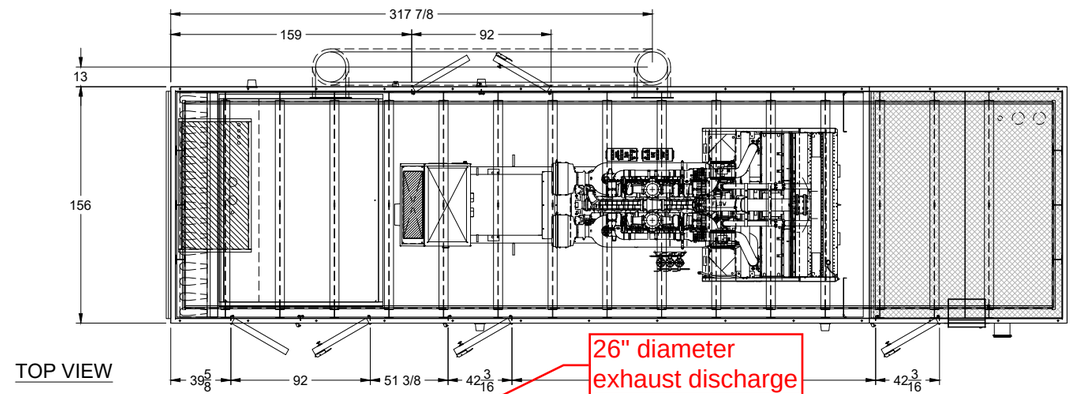
JOB NUMBER: ---

DRAWING DESCRIPTION: GENERAL ASSEMBLY

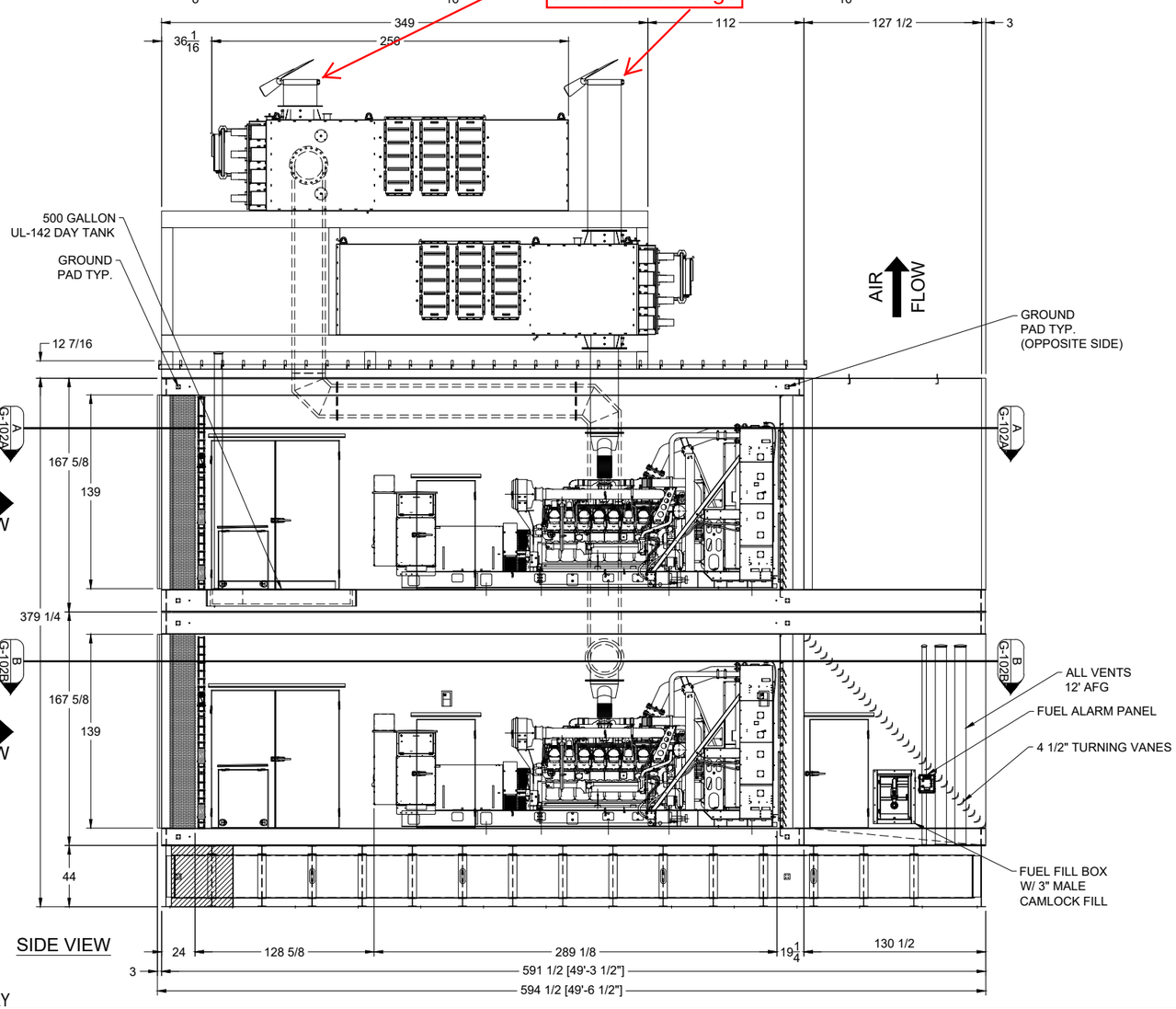
DRAWING NO: G-101A REV: CO

SHEET 1 OF 3

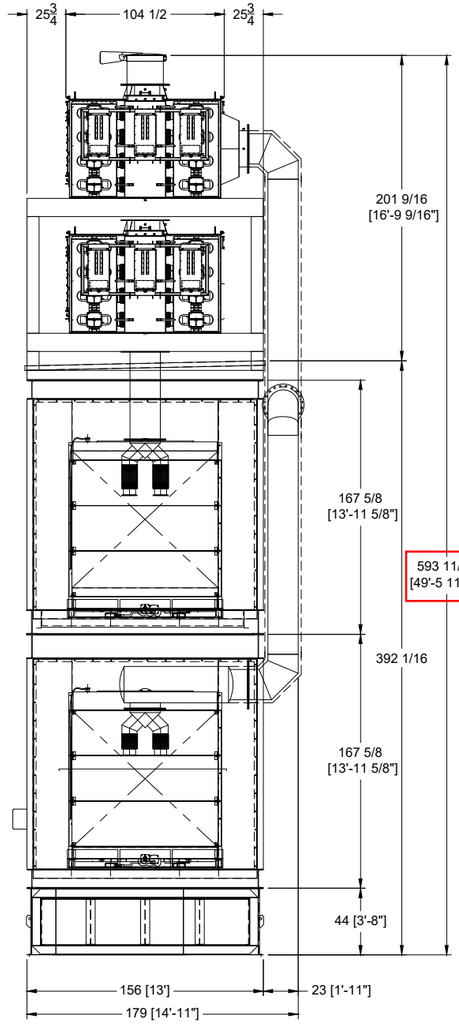
WEIGHTS OF COMPONENTS	
DESCRIPTION	WEIGHT (LBS)
10K UL-2085 SUB-BASE TANK (DRY)	85,000
LOWER ENCLOSURE W/ GEN	90,000
UPPER ENCLOSURE W/ GEN & 500 GALLON UL-142 DAY TANK	85,000
ROOF SCR LOWER UNIT	16,080
ROOF SCR UPPER UNIT	16,080
ROOF SCR SUPPORT STRUCTURE	10,000
800 GALLON DEF TANK	2,000
TOTAL DRY WEIGHT	**304,160 LBS**
10K GALLONS DIESEL @ 7.2lbs / Gal	72,000
500 GALLON DAYTANK DIESEL @ 7.2lbs / Gal	3,600
800 GALLONS DEF FLUID @ 9lbs / Gal	7,200
TOTAL WET WEIGHT	**386,960 LBS**



TOP VIEW



SIDE VIEW



Exhaust discharge height above grade

END VIEW

1 GENERAL ASSEMBLY
SCALE = 1 : 100

JOHNSON THERMAL SYSTEMS

REV:	DATE:	BY:	DESCRIPTION:	APP BY:	DATE:
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DRAWN BY: SC	DATE: 01-11-21
CHECKED BY: SC	DATE: 01-11-21
APPROVED BY: JT	DATE: 01-11-21

PROJECT NAME:
SFO60
DOUBLE STACK

PROJECT LOCATION:

CLIENT NAME:
PETERSON POWER

QUOTE NUMBER:
Q-2810-4

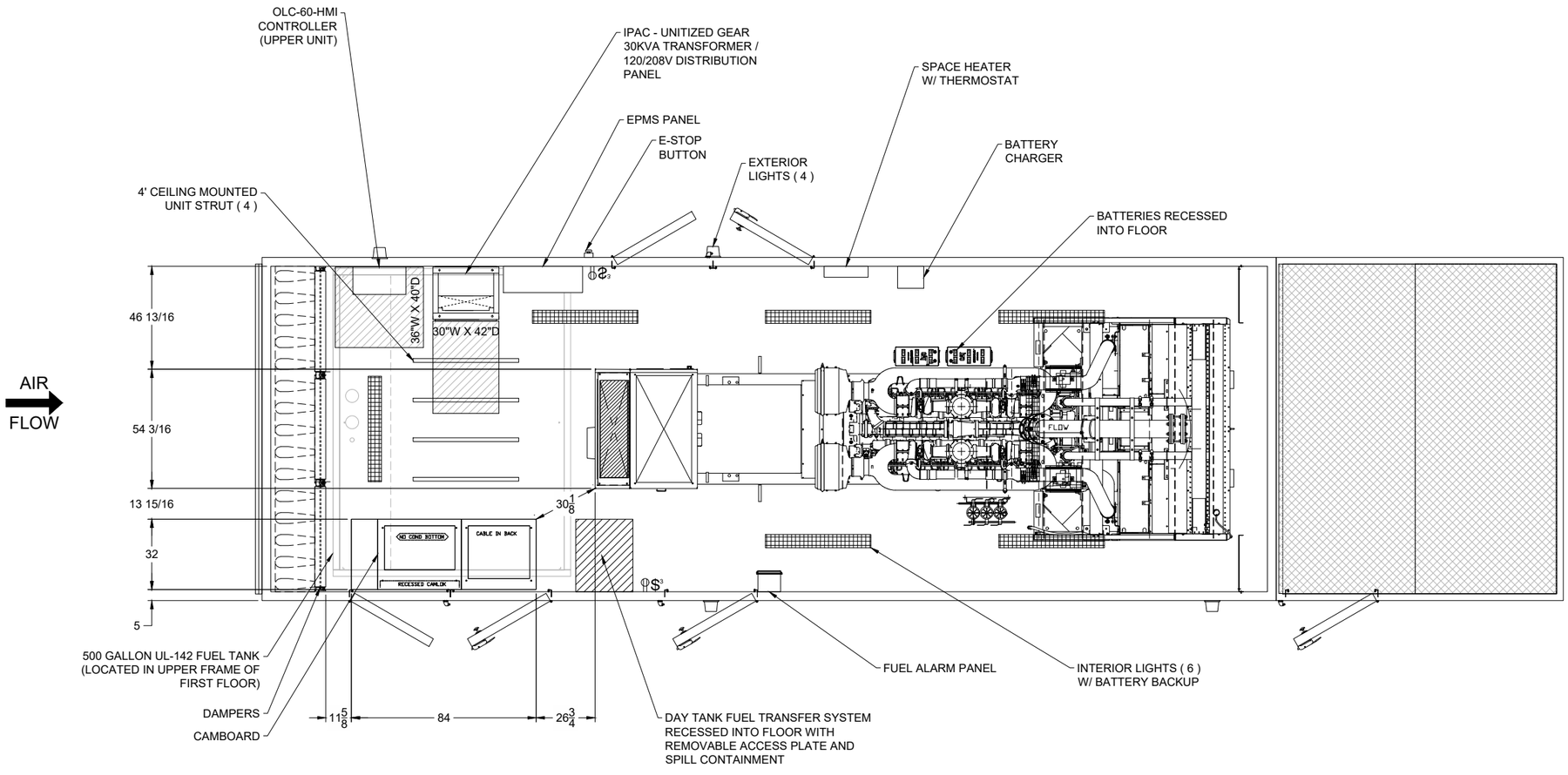
CUSTOMER PO NUMBER:

JOB NUMBER:

DRAWING DESCRIPTION:
GENERAL ASSEMBLY

DRAWING NO: G-102 REV: CO

SHEET 1 OF 3



SECTION A-A

1 PLAN VIEW
SCALE = 1 : 60

JOHNSON THERMAL SYSTEMS

REV:	DATE:	BY:	DESCRIPTION:	APP BY:	DATE:
-	-	-	-	-	-

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DRAWN BY: DP	DATE: 12-17-18
CHECKED BY: SC	DATE: 12-17-18
APPROVED BY: JT	DATE: 12-17-18

PROJECT NAME: SFO60 DOUBLE STACK

PROJECT LOCATION: ---

CLIENT NAME: PETERSON POWER

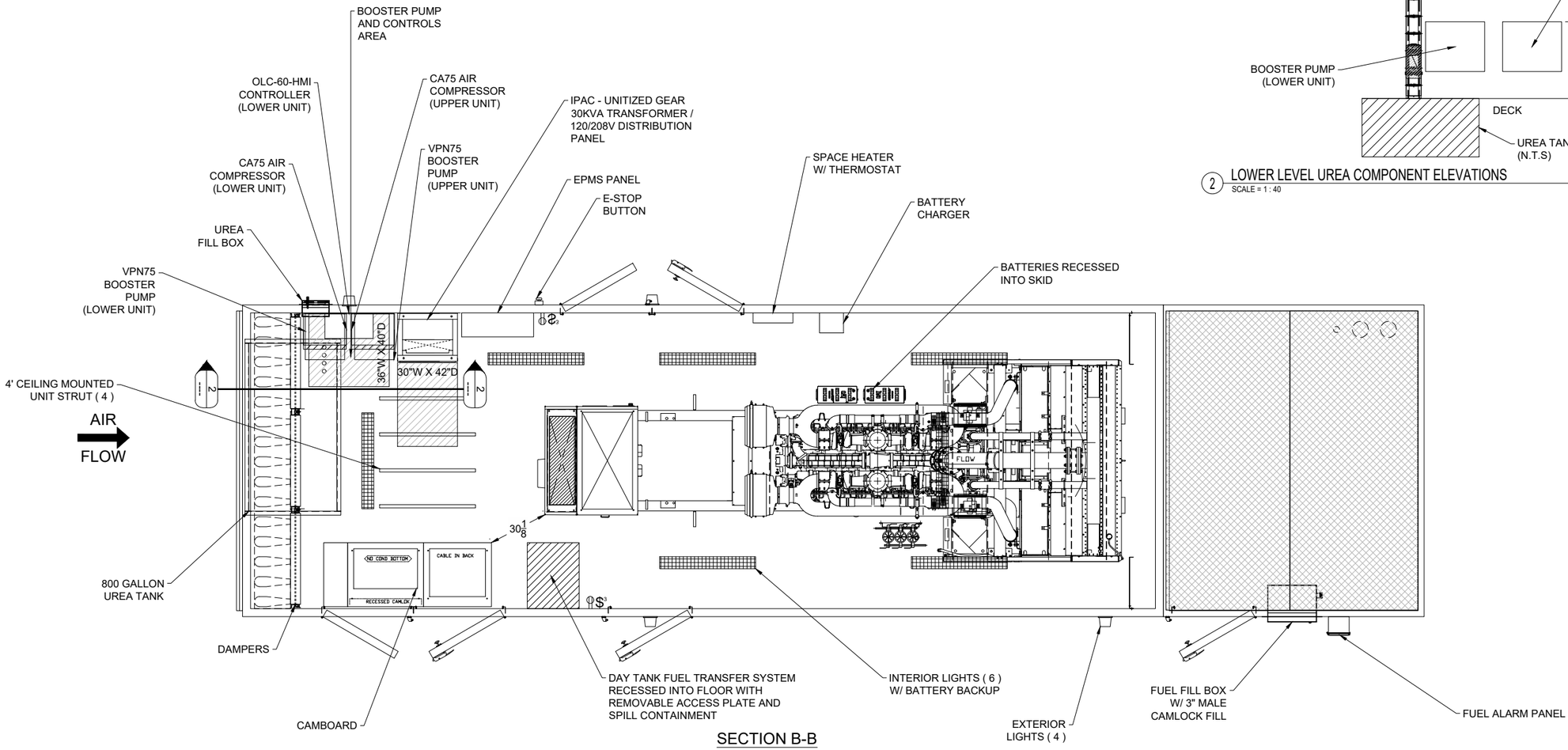
QUOTE NUMBER: Q-2810-4

CUSTOMER PO NUMBER: ---

JOB NUMBER: ---

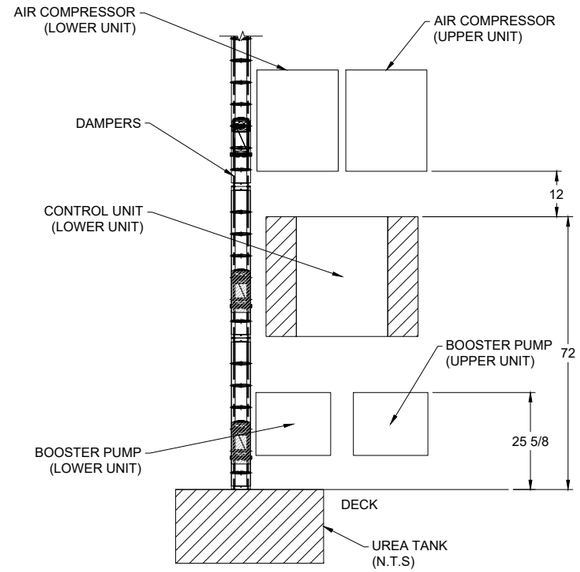
DRAWING DESCRIPTION: SECOND FLOOR PLAN VIEW

DRAWING NO: G-102A REV: CO



SECTION B-B

1 PLAN VIEW
SCALE = 1 : 60



2 LOWER LEVEL UREA COMPONENT ELEVATIONS
SCALE = 1 : 40

JOHNSON THERMAL SYSTEMS

REV:	DATE:	BY:	DESCRIPTION:	APP BY:	DATE:
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UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
DO NOT SCALE

DRAWN BY: DP	DATE: 12-17-18
CHECKED BY: SC	DATE: 12-17-18
APPROVED BY: JT	DATE: 12-17-18

PROJECT NAME:
SFO60
DOUBLE STACK

PROJECT LOCATION:

CLIENT NAME:
PETERSON POWER

QUOTE NUMBER:
Q-2810-4

CUSTOMER PO NUMBER:

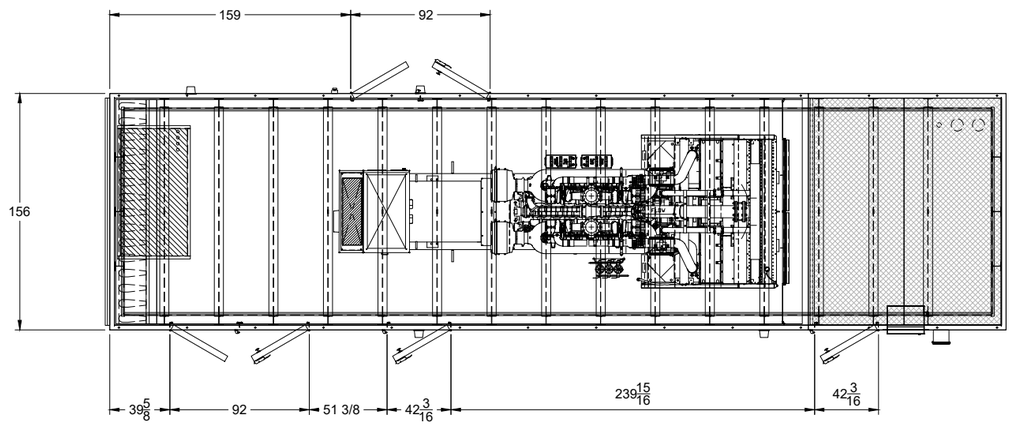
JOB NUMBER:

DRAWING DESCRIPTION:
FIRST FLOOR PLAN VIEW

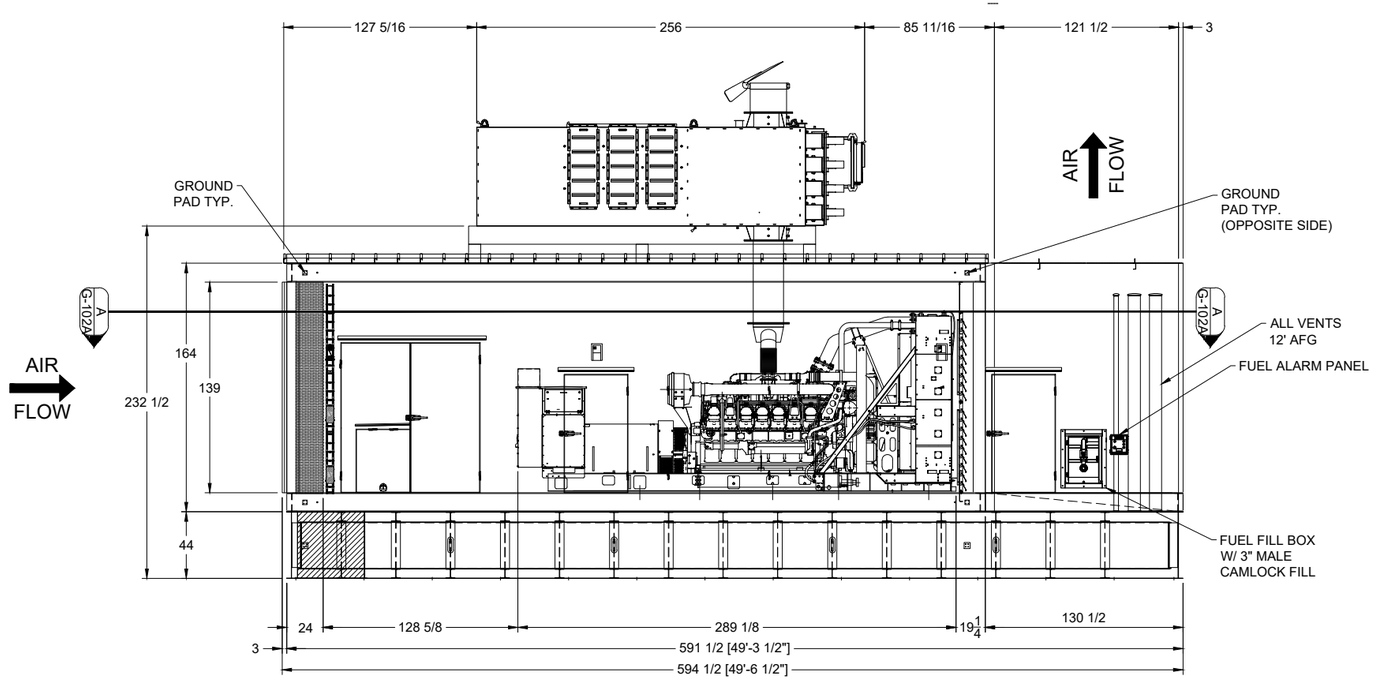
DRAWING NO: G-102B
REV: CO

SHEET 3 OF 3

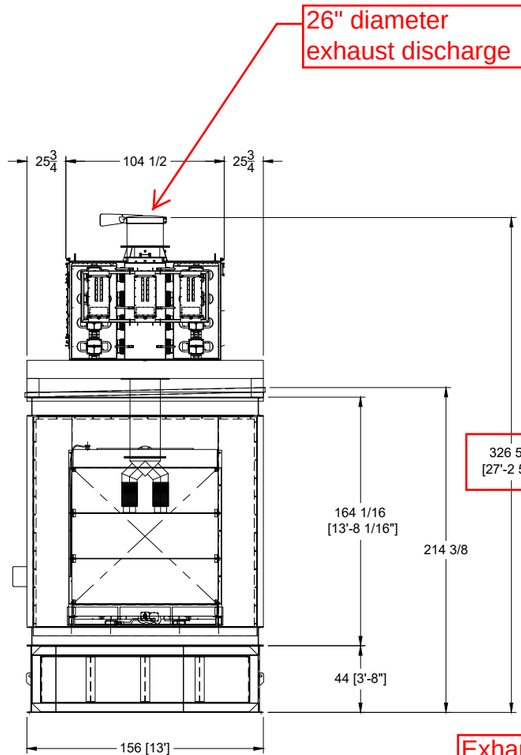
WEIGHTS OF COMPONENTS	
DESCRIPTION	WEIGHT (LBS)
5K UL-2085 SUB-BASE TANK (DRY)	73,400
ENCLOSURE W/ GEN	90,000
ROOF SCR UPPER UNIT	16,080
ROOF SCR SUPPORT STRUCTURE	3,500
350 GALLON DEF TANK	1,500
TOTAL DRY WEIGHT	**184,480 LBS**
5K GALLONS DIESEL @ 7.2lbs / Gal	36,000
350 GALLONS DEF FLUID @ 9lbs / Gal	3,150
TOTAL WET WEIGHT	**223,630 LBS**



TOP VIEW



SIDE VIEW



END VIEW

1 GENERAL ASSEMBLY
SCALE = 1 : 100

JOHNSON THERMAL SYSTEMS

REV:	DATE:	BY:	DESCRIPTION:	APP BY:	DATE:
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DRAWN BY: SC	DATE: 01-22-21
CHECKED BY: SC	DATE: 01-22-21
APPROVED BY: JT	DATE: 01-22-21

PROJECT NAME:
SFO60
SINGLE STACK

PROJECT LOCATION:

CLIENT NAME:
PETERSON POWER

QUOTE NUMBER: Q-2823-3

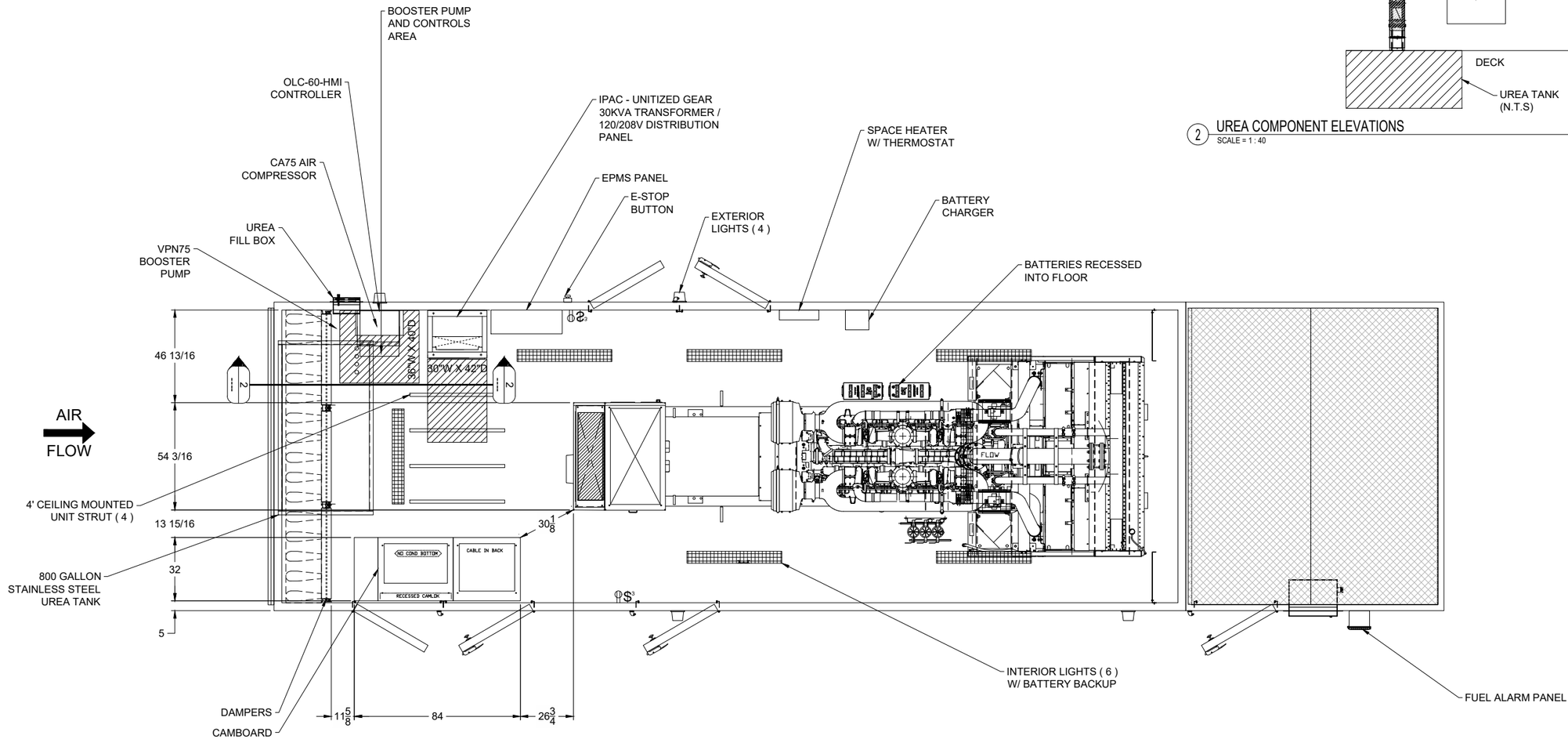
CUSTOMER PO NUMBER: ---

JOB NUMBER: ---

DRAWING DESCRIPTION:
GENERAL ASSEMBLY

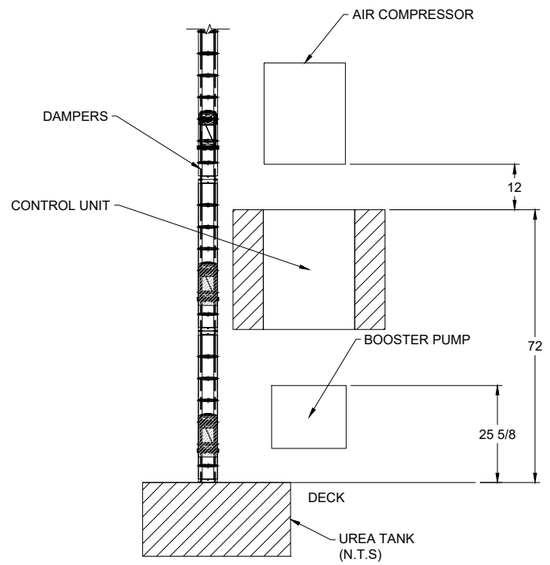
DRAWING NO: G-102 REV: CO

SHEET 1 OF 2



SECTION A-A

1 PLAN VIEW
SCALE = 1 : 60



2 UREA COMPONENT ELEVATIONS
SCALE = 1 : 40

JOHNSON THERMAL SYSTEMS

REV:	DATE:	APP BY:	DESCRIPTION:	BY:	DATE:
,	,	,	,	,	,

ISSUED FOR CONCEPTUAL

THE INFORMATION ON THIS DOCUMENT IS INTENDED ONLY AS CONCEPTUAL INFORMATION. THIS IS NOT INTENDED AS A SUBMITTAL FOR CONSTRUCTION PURPOSES.

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
DO NOT SCALE

DRAWN BY: DP	DATE: 01-22-21
CHECKED BY: SC	DATE: 01-22-21
APPROVED BY: JT	DATE: 01-22-21

PROJECT NAME:
SFO60
SINGLE STACK

PROJECT LOCATION:

CLIENT NAME:
PETERSON POWER

QUOTE NUMBER:
Q-2823-3

CUSTOMER PO NUMBER:

JOB NUMBER:

DRAWING DESCRIPTION:
PLAN VIEW

DRAWING NO:	REV:
G-102A	CO

SHEET 2 OF 2

Cat® C18 SEL GENERATOR S TS

Standby & Prime: 60Hz

Image shown might not reflect actual configuration

Engine Model	Cat® C18 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	145mm x 183mm (5.7in x 7.2in)
Displacement	18.1 L (1106 in³)
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

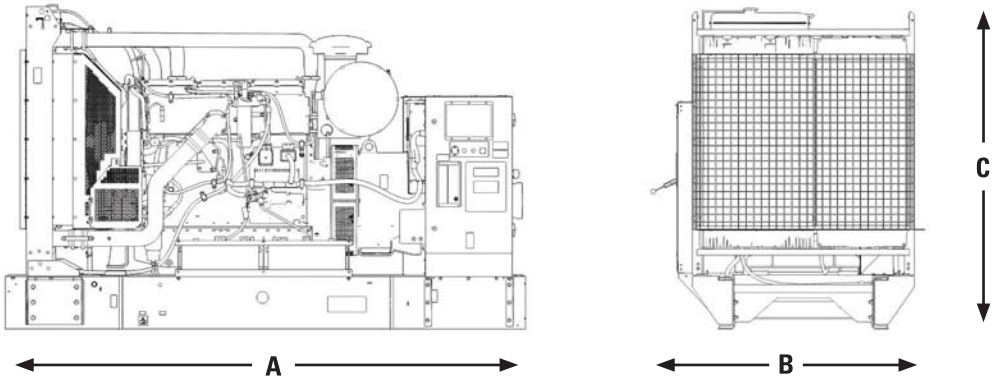
Model	Standby	Prime	Emission Strategy
C18	600 ekW, 750 kVA	545 ekW, 681 kVA	TIER II Non-Road

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	
Genset Power Rating	750 kVA	681 kVA
Genset power rating with fan @ 0.8 power factor	600 ekW	545 ekW
Emissions	TIER II Non-Road	
Performance Number	DM8518-04	DM8522-05
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	161.6 (42.7)	151.1 (39.9)
75% load with fan, L/hr (gal/hr)	129.6 (34.2)	123.6 (32.6)
50% load with fan, L/hr (gal/hr)	91.7 (24.2)	89.2 (23.6)
25% load with fan, L/hr (gal/hr)	46.8 (12.4)	48.7 (12.9)
Cooling System[1]		
Radiator air flow restriction (system), kPa (in. Water)	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m³/min (cfm)	803 (28357)	803 (28357)
Engine coolant capacity, L (gal)	20.8 (5.5)	20.8 (5.5)
Radiator coolant capacity, L (gal)	61 (16)	61 (16)
Total coolant capacity, L (gal)	82 (22)	82 (22)
Inlet Air		
Combustion air inlet flow rate, m³/min (cfm)	47.8 (1687.8)	46.7 (1649.0)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	49 (120)	49 (120)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	534.6 (994.3)	518.2 (964.8)
Exhaust gas flow rate, m³/min (cfm)	135.5 (4784.4)	129.6 (4576.4)
Exhaust system backpressure (maximum allowable) kPa (in. water)	10.0 (40.0)	10.0 (40.0)
Heat Rejection		
Heat rejection to jacket water, kW (Btu/min)	189 (10747)	175 (9953)
Heat rejection to exhaust (total) kW (Btu/min)	634 (36053)	596 (33895)
Heat rejection to aftercooler, kW (Btu/min)	153 (8700)	142 (8076)
Heat rejection to atmosphere from engine, kW (Btu/min)	86 (4902)	83 (4726)

Emissions (Nominal)[2]	Standby		Prime	
NOx, mg/Nm³ (g/hp-hr)	2798.7 (5.8)		2462.2 (5.1)	
CO, mg/Nm³ (g/hp-hr)	225.2 (0.5)		195.1 (0.4)	
HC, mg/Nm³ (g/hp-hr)	3.8 (0.01)		5.0 (0.01)	
PM, mg/Nm³ (g/hp-hr)	13.3 (0.03)		13.1 (0.03)	
Alternator[3]				
Voltages	480V	600V	480V	600V
Motor starting capability @ 30% Voltage Dip	1633 skVA	2023 skVA	1633 skVA	2023 skVA
Current	902 amps	722 amps	819 amps	656 amps
Frame Size	LC7024F	LC7024H	LC7024F	LC7024H
Excitation	AR	AR	AR	AR
Temperature Rise	150 ° C	130 ° C	125 ° C	105 ° C

WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
3477 (137)	**1628 (64)**	**2102 (83)**	**4431 (9769)**

APPLICABLE CODES AND STANDARDS:

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.
Note: Codes may not be available in all model configurations. Please consult your local Cat Dealer representative for availability.

STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

PRIME: Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year

RATINGS: Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

DEFINITIONS AND CONDITIONS

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

[2] Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 BTU/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

[3] UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40° C ambient per NEMA MG1-32.

LET'S DO THE WORK.™

LEHE1581-02 (05/20)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2020 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Caterpillar Inc.**
(U.S. Manufacturer or Importer)

Certificate Number: **LCPXL18.1NYS-019**

Effective Date: 07/25/2019

Expiration Date: 12/31/2020

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 07/25/2019

Revision Date: N/A

Model Year: 2020
Manufacturer Type: Original Engine Manufacturer
Engine Family: LCPXL18.1NYS

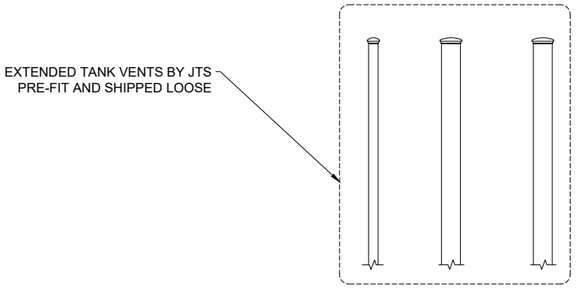
Mobile/Stationary Indicator: Stationary
Emissions Power Category: 560<kW<=2237
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Electronic Control, Engine Design Modification

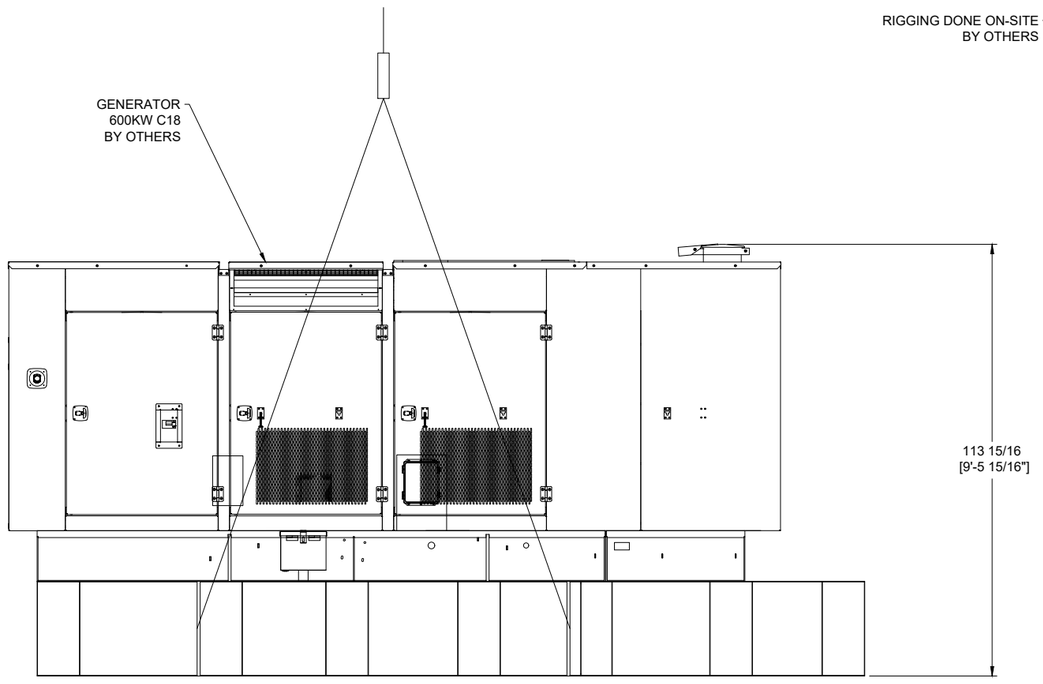
Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

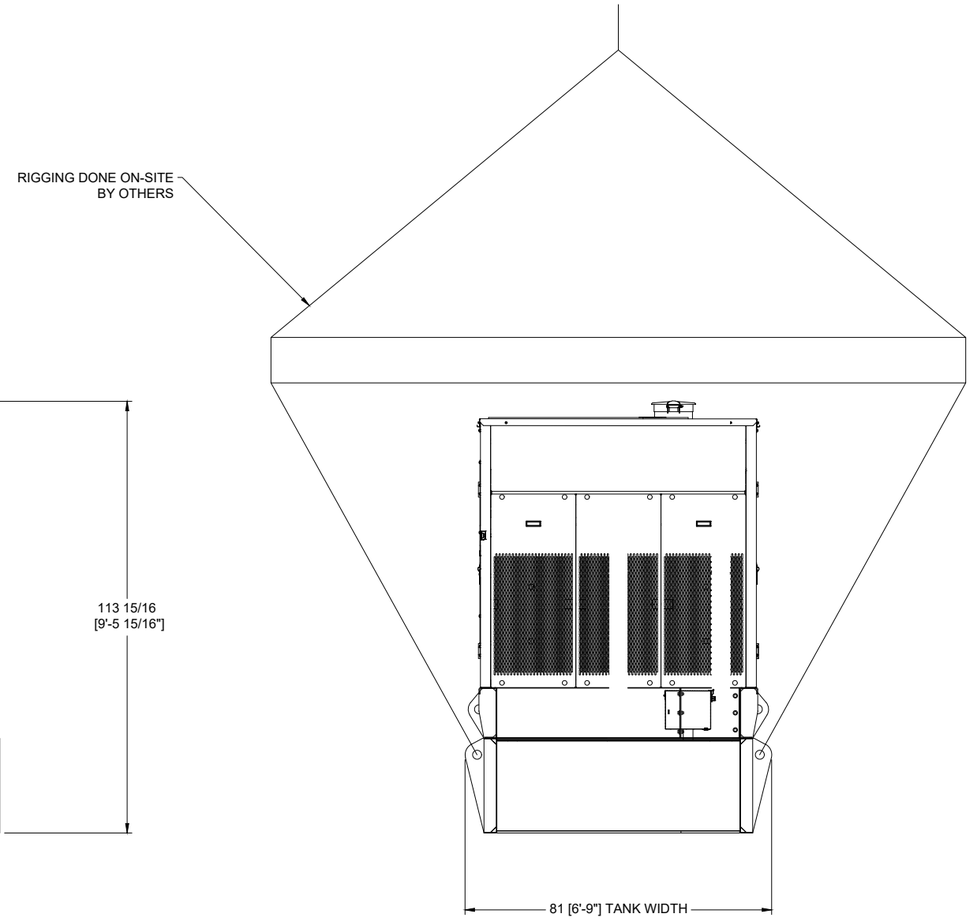
It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.





SIDE VIEW



DISCHARGE END VIEW

1 SHIPPING DIAGRAM
SCALE = 1 : 40

JOHNSON THERMAL SYSTEMS

REV:	DATE:	BY:	DESCRIPTION:	APP BY:	DATE:
A	05-29-20	JS	INITIAL SUBMITTAL	VC	05-29-20

ISSUED FOR APPROVAL

THE INFORMATION ON THIS DOCUMENT IS INTENDED TO CONVEY AND DOCUMENT THAT THE CONTRACT SPECIFICATION HAS BEEN ACCURATELY INTERPRETED AND MAY NOT BE ACCURATE FOR CONSTRUCTION PURPOSES.

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
DO NOT SCALE

DRAWN BY: JS	DATE: 05-29-20
CHECKED BY: JO	DATE: 05-29-20
APPROVED BY: VC	DATE: 05-29-20

PROJECT NAME:
AMAZON OPTDC C18 HOUSE GEN PACKAGE MASTER

PROJECT LOCATION:

CLIENT NAME:
PETERSON POWER SYSTEMS

QUOTE NUMBER:

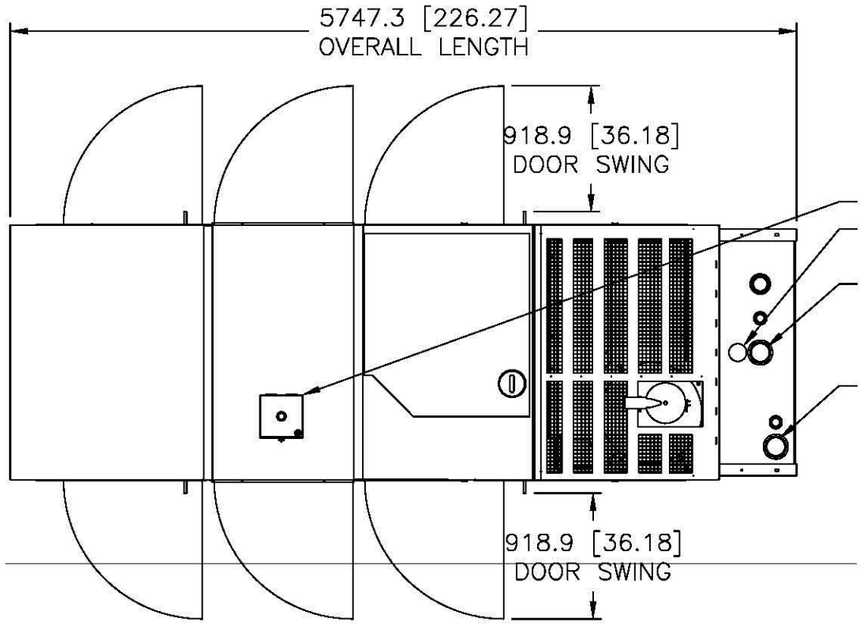
CUSTOMER PO NUMBER:

JOB NUMBER:

DRAWING DESCRIPTION:
SHIPPING DIAGRAM

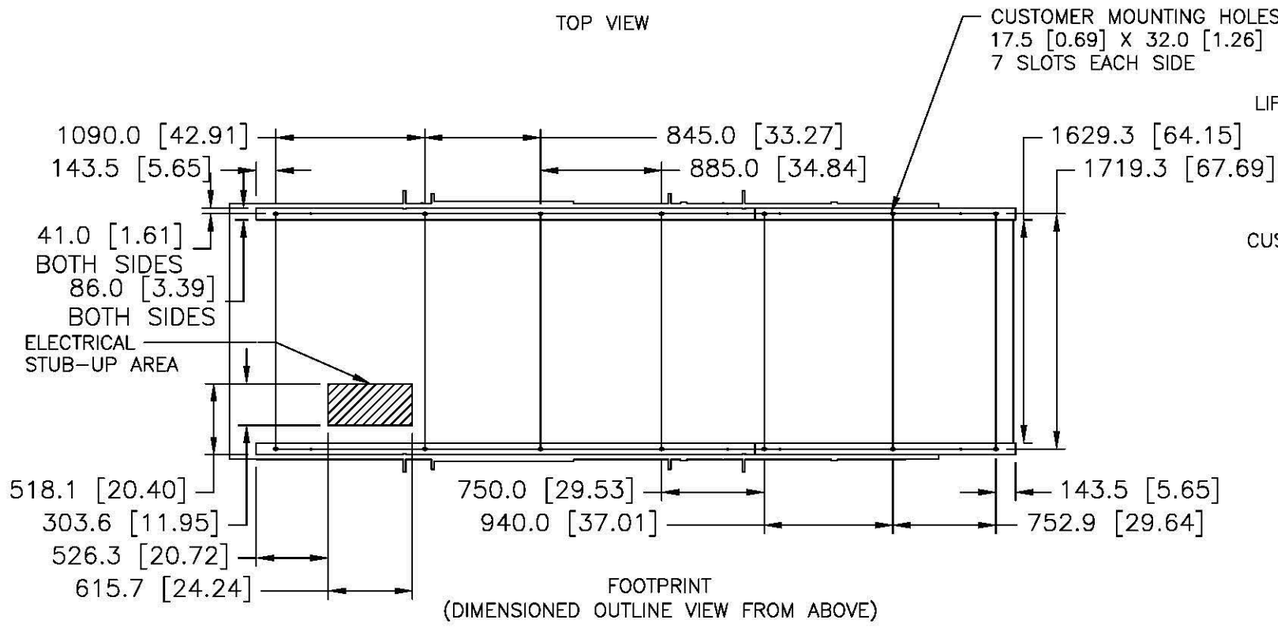
DRAWING NO:	REV:
G-102	A

SHEET 3 OF 6

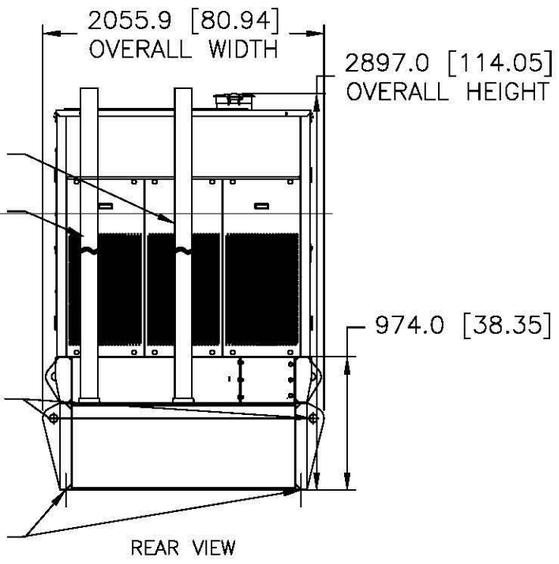


TOP VIEW

5–GALLON SPILL BUCKET W/OPV
2.5" NORMAL VENT
NPTF THD EXTENDED 12–FT ABOVE GRADE
5" MAIN TANK EMERGENCY VENT
NPTF THD EXTENDED 12–FT ABOVE GRADE
5" BASIN TANK EMERGENCY VENT
NPTF THD EXTENDED 12–FT ABOVE GRADE



FOOTPRINT
(DIMENSIONED OUTLINE VIEW FROM ABOVE)



REAR VIEW

PETERSON CAT
SAN LEANDRO, CA - HILLSBORO, OR
WEB: WWW.PETERSONPOWER.COM

REV	BY	DESCRIPTION	DATE

PROJECT NAME: PDX OPTDC MASTER HOUSE GEN.

DESCRIPTION: C18-600KW 480VAC 60HZ S.A. L1 ENCLOSURE, S.B. FUEL TANK

REFERENCE DRAWINGS:
C18DE6E: C18-600KW 480VAC GENSET
FTDW005: SUB-BASE FUEL TANK (1,041 GAL)
OGNAR65: LC7024J AREP ALT. END
ENCSAH3: S.A. ENCLOSURE L1

DRAWING STATUS: PRELIMINARY NOT FOR CONSTRUCTION

DRAWN BY:	PROJECT NUMBER:
EJD	N/A
CHECKED BY:	DATE: 06-19-20
APPROVED BY:	REV #: -
OVERALL LENGTH: 227"	WET WEIGHT: 26,300 LBS
OVERALL WIDTH: 81"	DRY WEIGHT: 18,000 LBS
OVERALL HEIGHT: 115"	SCALE: NONE

NOTES:
-ALL OVERALL DIMENSIONS ARE NOMINAL WITH ± 1" TOLERANCE SEE DRAWING FOR ALL DETAILED COMPONENT DIMENSIONS CONSULT FACTORY FOR QUESTIONS AND/OR DISCREPANCIES FOUND
-ALL MEASUREMENTS ARE DISPLAYED IN INCHES
-CENTER OF GRAVITY IS FOR WET WEIGHT

DRAWING NUMBER: C18-0600-S-102CW-01

SHEET NUMBER: 1 OF 3

Cat® C7.1 DIESEL GENERATOR SETS

Image shown might not reflect actual configuration

125 ekW- 200 ekW

60 Hz

Standby	Prime
125 ekW	114 ekW
150 ekW	135 ekW
175 ekW	158 ekW
200 ekW	-

BENEFITS & FEATURES

CAT® GENERATOR SET PACKAGE

Cat generator set packages have been fully prototype tested and certified torsional vibration analysis reports are available. The packages are designed to meet the NFPA 110 requirement for loading, conform to the ISO 8528-5 steady state and fill transient response requirements.

CAT DIESEL ENGINES

The four-cycle Cat diesel engine combines consistent performance with excellent fuel economy and transient response that meets or exceeds ISO 8528-5. The engines feature a reliable, rugged, and durable design that has been field proven in thousands of applications worldwide in emergency standby installations.

COOLING SYSTEM

The cooling system has been designed and tested to ensure proper generator set cooling, and includes the radiator, fan, belts, and all guarding installed as standard. Contact your Cat dealer for specific ambient and altitude capabilities.

GENERATORS

The generators used on Cat packages have been designed and tested to work with the Cat engine. The generators are built with robust Class H insulation and provide industry-leading motor starting capability and altitude capabilities.

EMCP CONTROL PANELS

The EMCP controller features the reliability and durability you have to come to expect from your Cat equipment. The EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP 4 systems can be further customized to meet your needs through programming and expansion modules.

SPECIFICATIONS

ENGINE SPECIFICATIONS

Engine Model	Cat® C7.1 ACERT In-line 6, 4-cycle diesel
Bore x Stroke	105mm x 127mm (4.1in x 5.0 in)
Displacement	7.01 L (428 in^3)
Compression Ratio	16.7:1
Aspiration	Turbocharged Air-to-Air-Aftercooled
Fuel Injection System	Electronic, Common Rail
Governor	Electronic ADEM™ A4
Emission Certifications	US EPA TIER III Non-Road

GENERATOR SET SPECIFICATIONS

Alternator Design	Brushless Single Bearing, 4 Pole
Stator	2/3 Pitch
No. of Leads	12
Available Voltage Options	~~600/480/440/240/220~~V 208/120vAC
Frequency	60Hz
Alternator Voltage	12V
Alternator Insulation & IP	Class H; IP23
Standard Temperature Rise	125/130 Deg C
Available Excitation Options	~~Self-Excited, AREP~~ PMG
Voltage Regulation, Steady State +/-	≤1%

Cat® C7.1 DIESEL GENERATOR SETS

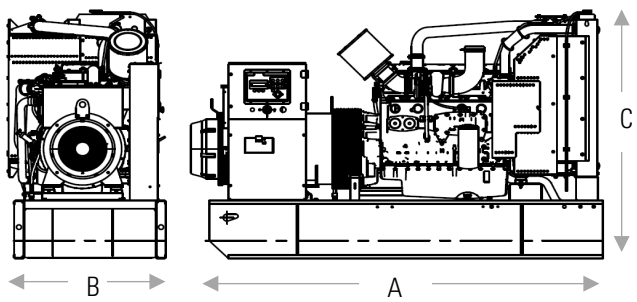
STANDARD EQUIPMENT

Air inlet system	Aftercooler core. Turbocharger
Control panels	EMCP4.2 control panel.
Cooling system	Radiator and cooling fan complete with protective guards. Standard ambient temperatures up to 50degC (122degF). 50% coolant antifreeze/corrosion inhibitor. Coolant Reservoir
Fuel system	Primary & secondary fuel filters. Fuel priming pump. Flexible fuel lines.
Generators and generator attachments	Brushless, self-excited 2/3 pitch, random wound. IP23 Protection. Insulation Class H and temperature rise Integrated Voltage Regulator
Governing system	Cat Electronic Governor (ADEM A4).
Protection System	Safety Shutoff – Low Oil Pressure Safety Shutoff – Overspeed Coolant Level Sensor
Starting/charging system	12-Volt Electric Starting Motor Batteries with rack & cables
General	Paint – Caterpillar Yellow except rails and radiators gloss black

OPTIONAL EQUIPMENT

Air inlet system	Single Element air filter Cartridge type air filter
Exhaust	Industrial, residential, critical mufflers.
Control panels	Remote Annunciators Discrete I/O Module Earth (Ground) Fault Relay
Circuit Breakers	3-Pole 100% Rated – Single & Dual breaker combination. 400a & 250a
Enclosures	Sound Attenuated (SA)- ~~Level 1~~ & Level 2 Weather Protective Aluminum Enclosure
Cooling system	Radiator Stone guards.
Mufflers	Industrial grade (10 dBA) Residential and Critical grade (25 dBA) & 35 dBA mufflers.
Fuel System	Sub Tank Bases:408 777 Gal
Generators and generator attachments	Excitation – Self Excitation –PMG Oversize
Starting/charging system	Standard Battery Set
Certifications	UL2200 Listed Certification of Compliance – IBC Seismic
General	Docking station for load bank

WEIGHTS & DIMENSIONS



See enclosure spec sheet

Standby Ratings	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Generator Set Weight kg (lb)
125 ekW	3039 (120)	1110 (44)	1476 (58)	1500 (3307)
150 ekW	3039 (120)	1110 (44)	1476 (58)	1500 (3307)
175 ekW	3039 (120)	1110 (44)	1476 (58)	1500 (3307)
200 ekW	3039 (120)	1110 (44)	1476 (58)	1500 (3307)