

Rental Power 200 kW

U.S. EPA Tier IV Emissions



Description

This Cummins Power Generation rental package is a fully integrated mobile power generation system, providing optimum performance, reliability, and versatility for standby and prime power applications.

Features

Cummins diesel engines

- U.S. Tier IV Final and EU SIIIa certified Cummins QSB7-G9 engines which meet emissions limits without the use of a diesel particulate filter (DPF)
- Dual speed engine for operation at 50 or 60 Hz
- Advanced electronic engine controls with integrated aftertreatment system provide superior fuel efficiency while reducing emissions
- High-pressure common rail fuel system reduces engine noise and smoke
- Cummins Direct Flow™ air filtration offering improved air management, longer service life, and easier serviceability
- 2-stage fuel filtration with optimum particle and water separation

Control features

- The most advanced, reliable and capable generator set control system on the market today
- PowerCommand 3.3® with Masterless Load Demand (MLD) technology enables smartly adapting power to match varying load demand. MLD capable generators allow sharing of information among paralleled generator sets.
- Controls provide precise frequency and voltage regulation, alarm and status message display in one easy to operate customer interface

Engine controls

- Oil pressure and coolant temp gauge
- Fuel level gauge, Diesel Exhaust Fluid (DEF) level gauge and battery voltage gauge
- Hour meter
- Engine control module includes remote start capability

Stamford alternators

- 12-lead reconnectable alternators fitted with voltage selection switch
- Permanent magnet excitation for improved performance in non-linear load applications

Rental package enclosure

- Camlock distribution panel
- Sound attenuated, white powder coated lockable enclosure
- 24 hour fuel tank (75% prime) with gauge
- Roof mounted, single point lift
- Cooling system rated for 122° F (50° C) at 100% standby ambient
- Complete engine fluid containment reservoir
- 4 position voltage selector switch (277/480 or 130/240 or 120/208 VAC 3 phase or 120/240 VAC1 phase)
- Shore power (15A/120V) – for coolant heater and battery charger
- Conveniently located analog gauges and heated Human Machine Interface (HMI) display

Rental package options

- Optional Auxiliary Fuel and DEF connections
- DOT approved electric brake trailer with heavy duty center mounted jack, ball or pintle hitch
- DOT approved hydraulic brake trailer with heavy duty center mounted jack, ball or pintle hitch

Model	Voltages (V)	Standby Rating		Prime Rating		Sound level Full load @ 7m	Alternator model
		60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)		
C200D2RE	208/480	200 (250)	172 (215)	180 (225)	156 (195)	73 dBA	UCDI274J

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Engine specifications

Engine model	QSB7-G9
Alternator data sheet	UCDI274J (208/480)
Tier rating	Tier IV
Design	4 cycle, In-Line, turbocharged and after-cooled
Bore	107 mm (4.21 in.)
Stroke	124.0 mm (4.88 in.)
Displacement	6.69 liters (408 in ³)
Cylinder block	Cast iron, In-Line 6 cylinder
Battery capacity	2 x 760 cca
Battery charging alternator	70 amps
Starting voltage	24 volt, negative ground
Fuel system	Direct injection HPCR system
Fuel filter	Spin on fuel filter with water separator
Air cleaner type	2-stage, dry replaceable element with dust ejector
Lube oil filter type(s)	Single spin-on, full flow
Standard cooling system	122 °F (50 °C) ambient radiator

Alternator specifications

Design	Brushless, 4 pole, drip proof revolving field
Stator	Double layer concentric, 2/3 winding pitch
Rotor	Single bearing, flexible disc
Insulation system	Class H per NEMA MG1-1.65 (208/480 VAC)
Standard temperature rise	125/40 °C prime (208/480 VAC)
Exciter type	PMG (permanent magnet generator)
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower fan
AC waveform total harmonic distortion	< 1.5% no load, < 5% non-distorting balance linear load
Telephone influence factor (TIF)	< 50 per NEMA MG1-22.43
Telephone harmonic factor (THF)	< 2%

Power capability specifications (Assume power factor = 0.80 for 3 phase amps)

	Standby rating				
	240 V, 1 phase Amps 60Hz	208 V, 3 phase Amps 60Hz	480 V, 3 phase Amps 60Hz	240 V, 3 phase Amps 60Hz	400 V, 3 phase Amps 50Hz
C200D2RE	361	694	301	601A	310

Electrical power panel specifications

Model voltage	120 V duplex receptacles	240 V twist	Load lug connection (stud diameter)	Load lug circuit breakers
120/480 Volt	2 - 20 Amp GFCI	3 - 50 Amp	1/2 inch	800 Amp

PowerCommand 3.3 Control System



An integrated microprocessor based generator set control system providing voltage regulation, engine protection, alternator protection, operator interface and isochronous governing. Refer to document S-1570 for more detailed information on the control.

Simplified display for rental operators - simplified display tailored for rental equipment operations for ease of use.

Masterless Load Demand (MLD) - The controller is capable of smartly managing power from paralleled generators to match varying load patterns.

Power management - Control function provides battery monitoring and testing features and smart starting control system.

Advanced control methodology - Three phase sensing, full wave rectified voltage regulation, with a PWM output for stable operation with all load types.

Regulation compliant - Prototype tested: UL, CSA and CE compliant.

Service - InPower™ PC-based service tool available for detailed diagnostics, setup, data logging and fault simulation.

Easily upgradeable - PowerCommand controls are designed with common control interfaces.

Reliable design - The control system is designed for reliable operation in harsh environment.

Operator panel features

Operator/display functions

- Displays paralleling breaker status
- Provides direct control of the paralleling breaker
- 320 x 240 pixels graphic LED backlight LCD
- Auto, manual, start, stop, fault reset and lamp test/panel lamp switches
- Alpha-numeric display with pushbuttons
- Heated HMI
- LED lamps indicating genset running, remote start, not in auto, common shutdown, common warning, manual run mode, auto mode and stop

Paralleling control functions

- First Start Sensor System selects first genset to close to bus
- Phase Lock Loop Synchronizer with voltage matching
- Sync check relay
- Isochronous kW and kVar load sharing
- Load govern control for utility paralleling
- Extended Paralleling (baseload/peak shave) Mode
- Digital power transfer control, for use with a breaker pair to provide open transition, closed transition, ramping closed transition, peaking and base load functions,

Alternator data

- Line-to-neutral and line-to-line AC volts
- 3-phase AC current
- Frequency
- kW, kvar, power factor kVA (three phase and total)

Engine data

- DC voltage
- Engine speed
- Lube oil pressure and temperature
- Coolant temperature
- Comprehensive FAE data (where applicable)

Other data

- Genset model data
- Start attempts, starts, running hours, kW hours
- Load profile (operating hours at % load in 5% increments)
- Fault history
- Data logging and fault simulation (requires InPower)

Standard control functions

Digital governing

- Integrated digital electronic isochronous governor
- Temperature dynamic governing

Digital voltage regulation

- Integrated digital electronic voltage regulator
- 3-phase, 4-wire line-to-line sensing
- Configurable torque matching

AmpSentry AC protection

- AmpSentry protective relay
- Over current and short circuit shutdown
- Over current warning
- Single and three phase fault regulation
- Over and under voltage shutdown
- Over and under frequency shutdown
- Overload warning with alarm contact
- Reverse power and reverse var shutdown
- Field overload shutdown

Engine protection

- Battery voltage monitoring, protection and testing
- Overspeed shutdown
- Low oil pressure warning and shutdown
- High coolant temperature warning and shutdown
- Low coolant level warning or shutdown
- Low coolant temperature warning
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Cranking lockout
- Sensor failure indication
- Low fuel level warning or shutdown
- Fuel-in-rupture-basin warning or shutdown
- Full authority electronic engine protection

Control functions

- Time delay start and cool down
- Real time clock for fault and event time stamping
- Exerciser clock and time of day start/stop
- Data logging
- Cycle cranking
- Load shed
- Remote emergency stop

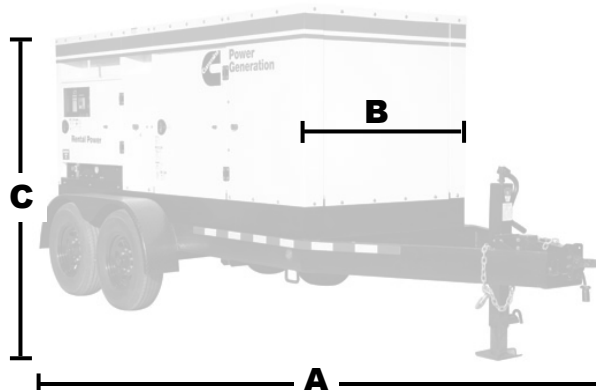
Ratings definitions

Standby:

Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271 and BS5514). Nominally rated.

Prime (unlimited running time):

Applicable for supplying power in lieu of commercially purchased power. Prime power is the maximum power available at a variable load for an unlimited number of hours. A 10% overload capability is available for limited time. (Equivalent to Prime Power in accordance with ISO8528 and Overload Power in accordance with ISO3046, AS2789, DIN6271, and BS5514).



Dimensions

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Weight w/o fuel kg (lbs)	Weight with fuel kg (lbs)	Fuel capacity liters (gal)*
C200D2RE	3700 (146)	1450 (57)	1700 (67)	3220 (7100)	4000 (8830)	965 (255)
With trailer	5740 (226)	2140 (84)	2309 (91)	3950 (8710)	4730 (10440)	965 (255)

* Onboard DEF capacity is sized for 24 hours of operation at 15 gallons

Fuel consumption

60 Hz Ratings, kW (kVA)	Standby					Prime				Hours of operation
	Load	200 (250)				180 (225)				
	US Gal/hr	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	75% load
	L/hr	3.1	6.3	9.3	11.0	2.8	5.6	8.9	10.3	24
		11.7	23.8	35.2	41.6	10.6	21.2	33.7	38.9	24

Note: DEF consumption less than 4% of fuel consumption

Trailer information

Model	Tire size	Tire type	Load range	Number of tires per trailer	Lug pattern
C200D2RE	235/85-R16	Radial	2755 lbs - each	4	8 hole

Certifications

These generator sets are certified to following standards:



CAN/CSA STD C22.2 NO. 100-04
CAN/CSA STD C22.2 NO. 14-05

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USA

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NAS-5887a-EN (5/14)



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ALTERNATOR DATA SHEET

Frame Size

UCD3J

CHARACTERISTICS

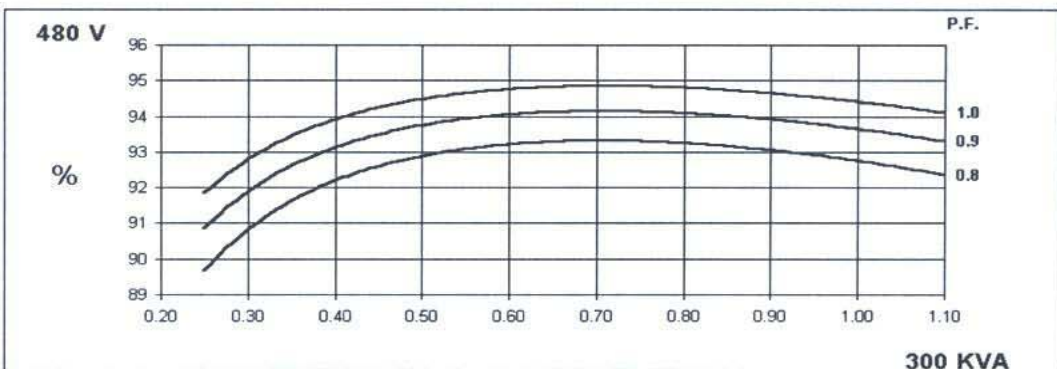
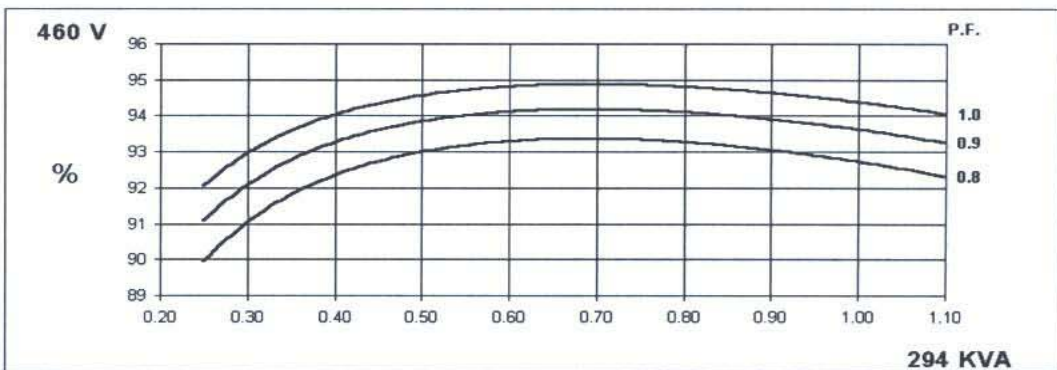
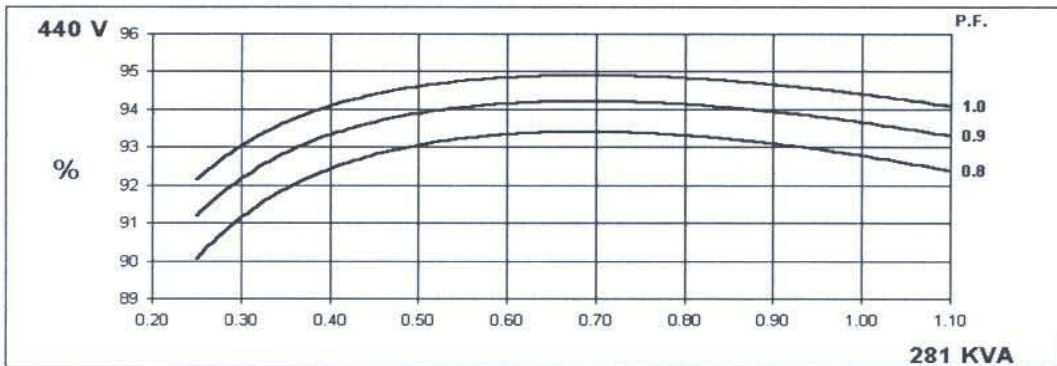
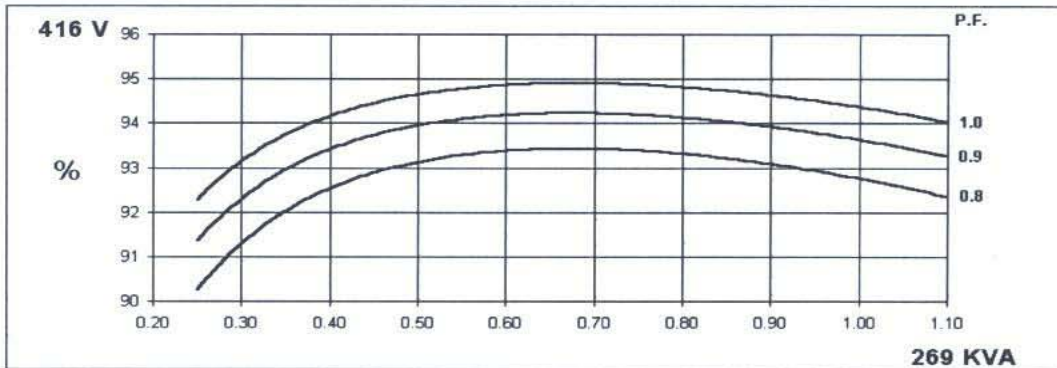
WEIGHTS	Wound Stator Assembly	670.205 lb	304 kg
	Rotor Assembly	597.45 lb	271.9 kg
	Complete Alternator	1602.76 lb	727 kg
MAXIMUM SPEED		2250 rpm	
EXCITATION CURRENT	Full Load	2.20 Amps	
	No Load	0.50 Amps	
INSULATION SYSTEM	Class H Throughout		

1 Ø <input type="checkbox"/> RATINGS (1.0 Power Factor) (Based on specified temperature rise at 40°C ambient temperature)	60 Hz (Winding no)					50 Hz (Winding no)				
	Double Delta		4 Lead			Double Delta				
125°C Rise Ratings kW/kVA	<u>120/240</u>		<u>120/240</u>			<u>110-120</u> <u>220-240</u>				
105°C Rise Ratings kW/kVA	161/201		175/219			140/175				
	150/188		157/196			126/158				
3 Ø <input type="checkbox"/> RATINGS (0.8 Power Factor) (Based on specified temperature rise at 40°C ambient temperature)	Upper Broad Range				LBR*	347/600	Broad Range			
	<u>120/208</u> <u>240/416</u>	<u>127/220</u> <u>255/440</u>	<u>139/240</u> <u>277/480</u>	<u>190-208</u> <u>380-416</u>		<u>347/600</u>	<u>110/190</u> <u>220/380</u>	<u>115/200</u> <u>230/400</u>	<u>120/208</u> <u>240/415</u>	<u>127/220</u> <u>254/440</u>
150°C Rise Ratings kW	230	240	255	255	230	200	200	200	172	
kVA	288	300	319	319	288	250	250	250	215	
125°C Rise Ratings kW	215	225	240	240	215	184	184	184	164	
kVA	269	281	300	300	269	230	230	230	205	
105°C Rise Ratings kW	200	211	220	220	200	168	168	168	148	
kVA	250	264	275	275	250	210	210	210	185	
80°C Rise Ratings kW	170	180	190	190	170	154	154	154	128	
kVA	213	225	238	238	213	193	193	193	160	
3 Ø <input type="checkbox"/> REACTANCES (per unit ± 10%) (Based on full load at 105°C Rise Rating)	416	440	480	380	600	380	400	415	440	
	2.651	2.457	2.221	2.00	2.00	1.939	1.75	1.626	N/A	
Synchronous	0.164	0.153	0.137	0.13	0.13	0.103	0.093	0.086	N/A	
Transient	0.096	0.09	0.08	0.07	0.07	0.07	0.064	0.059	N/A	
Subtransient	0.117	0.109	0.098	0.14	0.14	0.117	0.105	0.098	N/A	
Negative Sequence	0.048	0.045	0.04	0.04	0.04	0.044	0.04	0.037	N/A	
Zero Sequence	<u>Broad Range</u>				<u>LBR*</u>	<u>600</u>	<u>Broad Range</u>			
Maximum kVA (Shunt)	770				770	770	535			
(90% Sustained Voltage) (PMG)	920				920	920	678			
TIME CONSTANTS (Sec)	<u>Broad Range</u>				<u>LBR*</u>	<u>600</u>	<u>Broad Range</u>			
	0.045				0.045	0.045	0.045			
Transient	0.015				0.015	0.015	0.015			
Subtransient	1.270				1.270	1.270	1.270			
Open Circuit	0.030				0.030	0.030	0.030			
DC										
WINDINGS (@20°C)	<u>Broad Range</u>				<u>LBR*</u>	<u>600</u>	<u>Broad Range</u>			
	0.0128				0.0128	0.0128	0.0128			
Stator Resistance (Ohms per phase)	2.0000				2.0000	2.0000	2.0000			
Rotor Resistance (Ohms)	12				12	6	12			
Number of Leads										

* Lower broad range 110/190 thru 120/208, 220/380 thru 240/416.



THREE PHASE EFFICIENCY CURVES



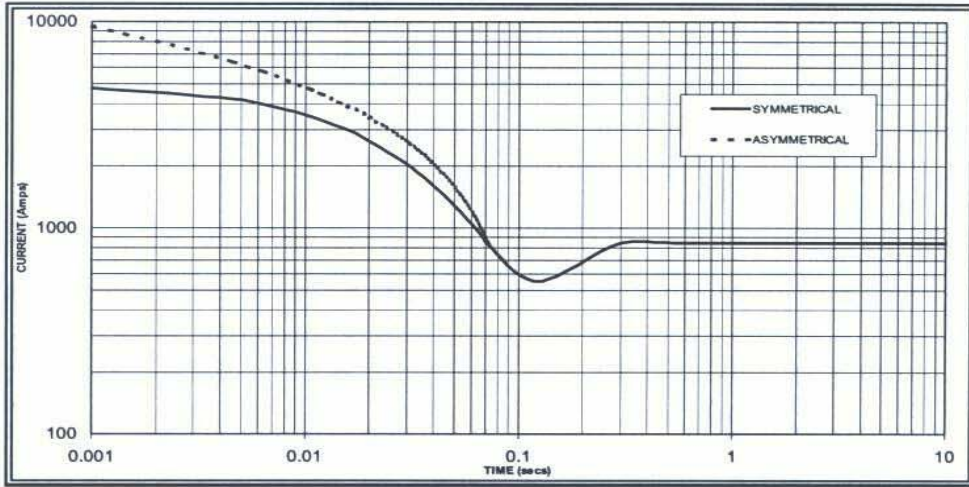


ALTERNATOR DATA SHEET

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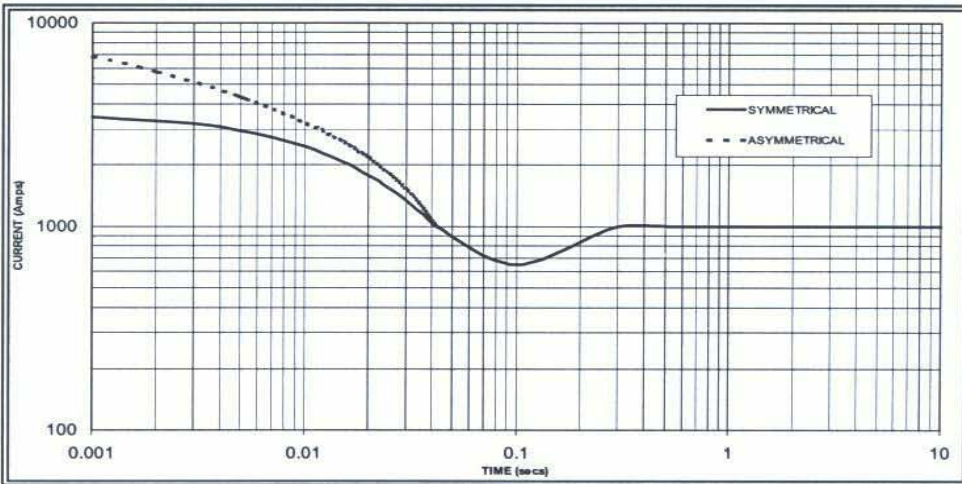
Three-phase Short Circuit Decrement Curve. No-load Excitation at Rated Speed Based on star (wye) connection.

50 Hz



Sustained Short Circuit = 850 Amps

60 Hz



Sustained Short Circuit = 1,000 Amps

Note 1

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

50Hz		60Hz	
Voltage	Factor	Voltage	Factor
380v	X 1.00	416v	X 1.00
400v	X 1.05	440v	X 1.07
415v	X 1.10	460v	X 1.12
440v	X 1.16	480v	X 1.16

The sustained current value is constant irrespective of voltage level

Note 2

The following multiplication factor should be used to convert the values calculated in accordance with NOTE 1 to those applicable to the various types of short circuit :

	3-phase	2-phase L-L	1-phase L-N
Instantaneous	x 1.00	x 0.87	x 1.30
Minimum	x 1.00	x 1.80	x 3.20
Sustained	x 1.00	x 1.50	x 2.50
Max. sustained duration	10 sec.	5 sec.	2 sec.

All other times are unchanged

Note 3

Curves are drawn for Star (Wye) connected machines. For other connection the following multipliers should be applied to current values as shown :

Parallel Star = Curve current value X 2

Series Delta = Curve current value X 1.732



ALTERNATOR DATA SHEET

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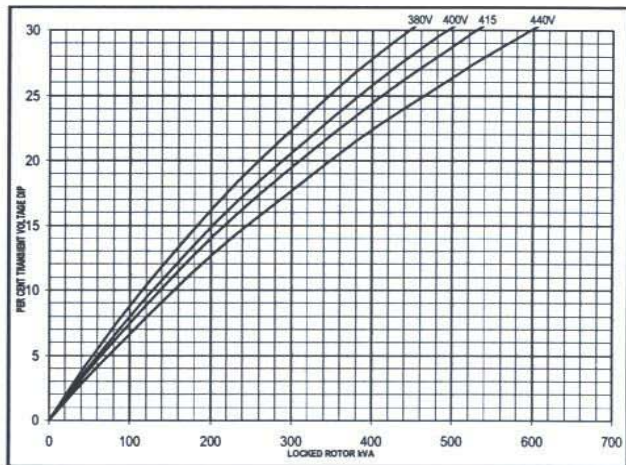
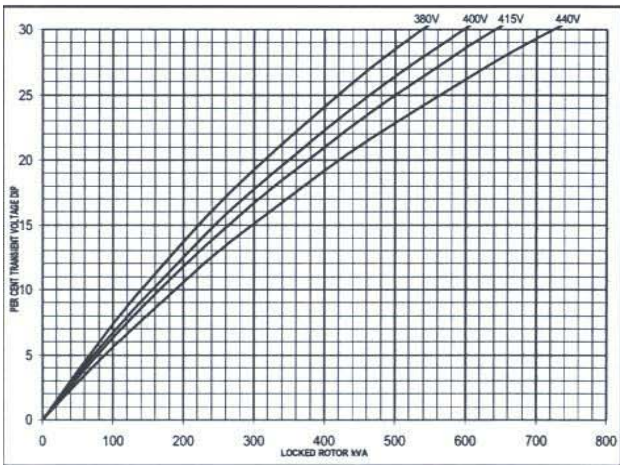
Winding 311

Locked Rotor Motor Starting Curve

**50
Hz**

MX

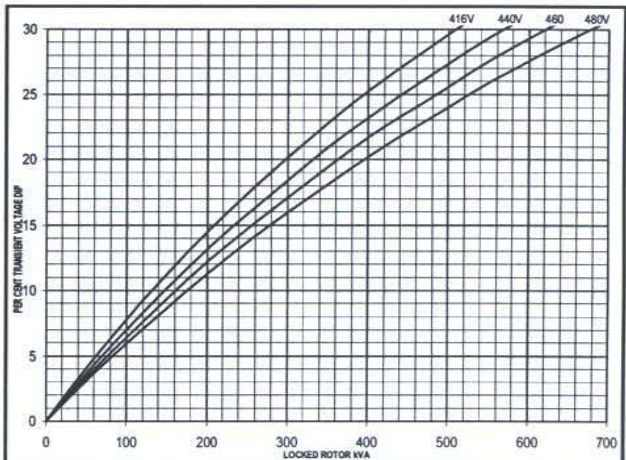
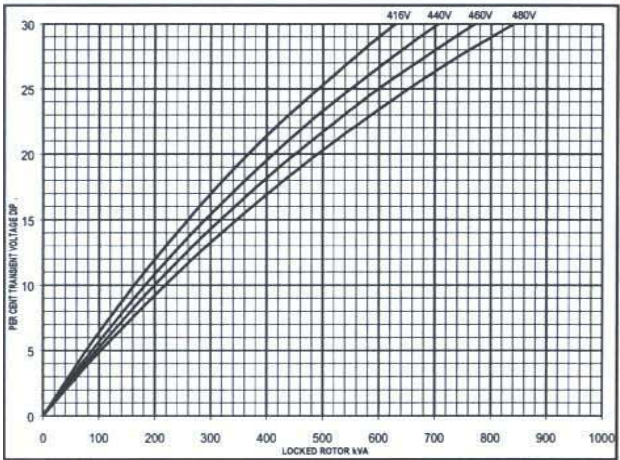
SX



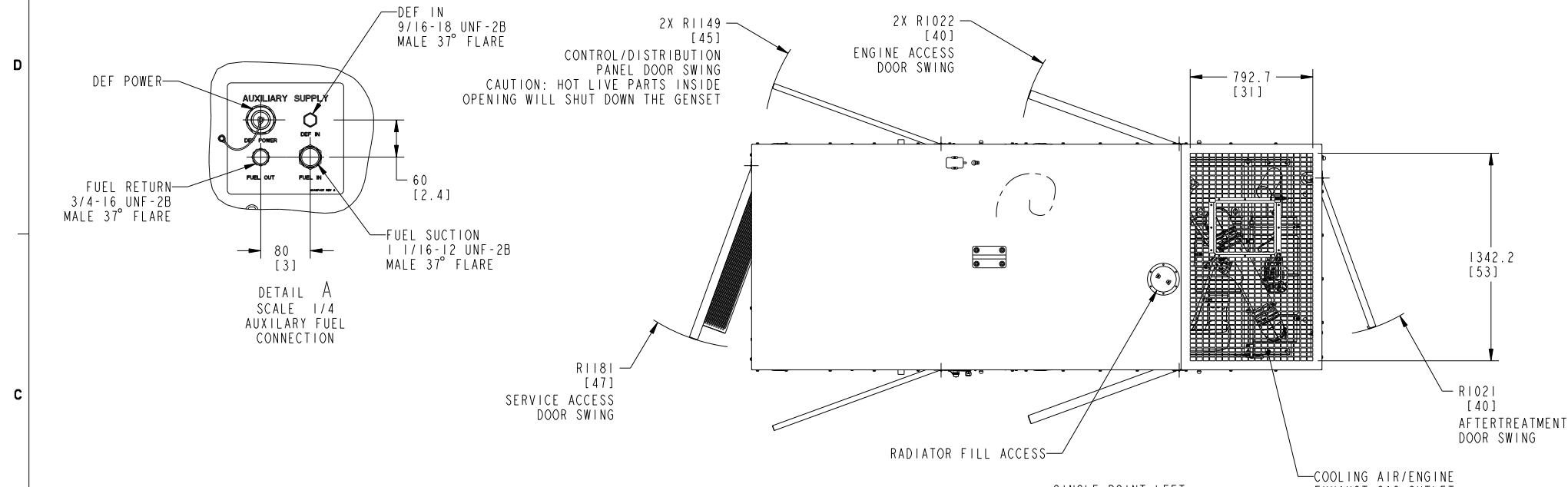
**60
Hz**

MX

SX

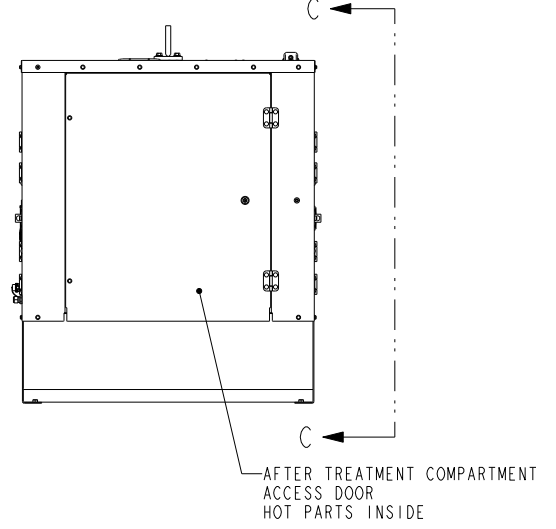
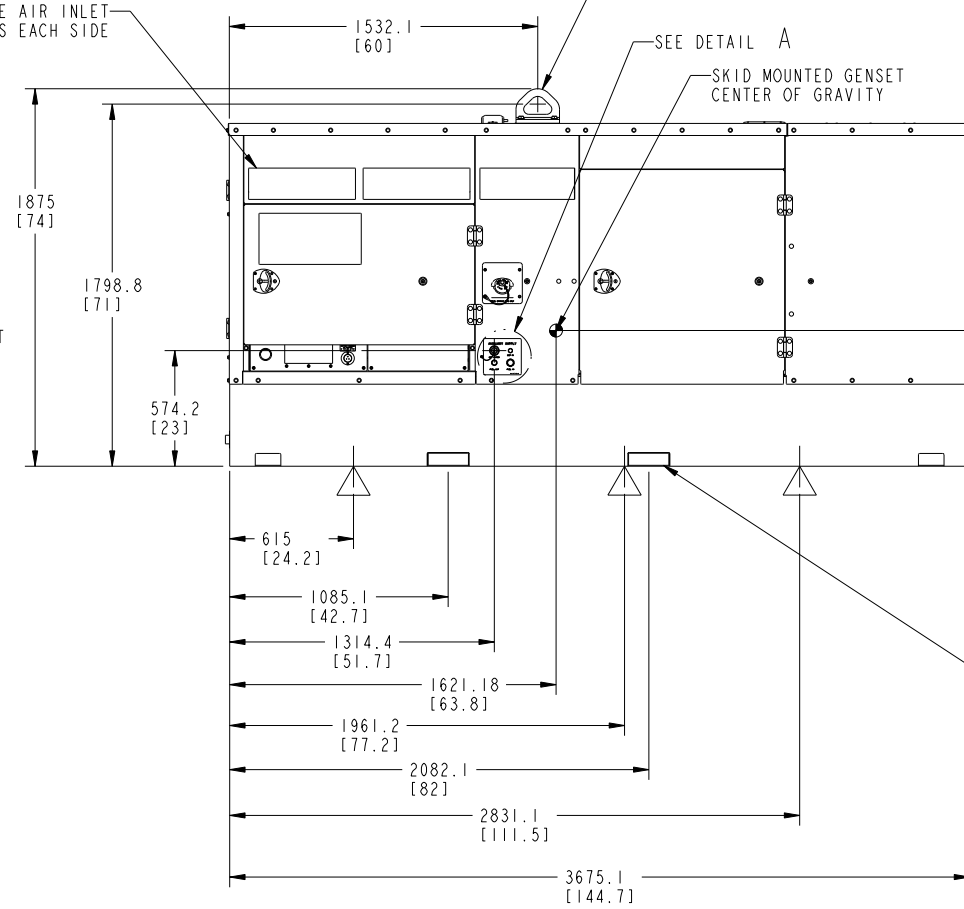
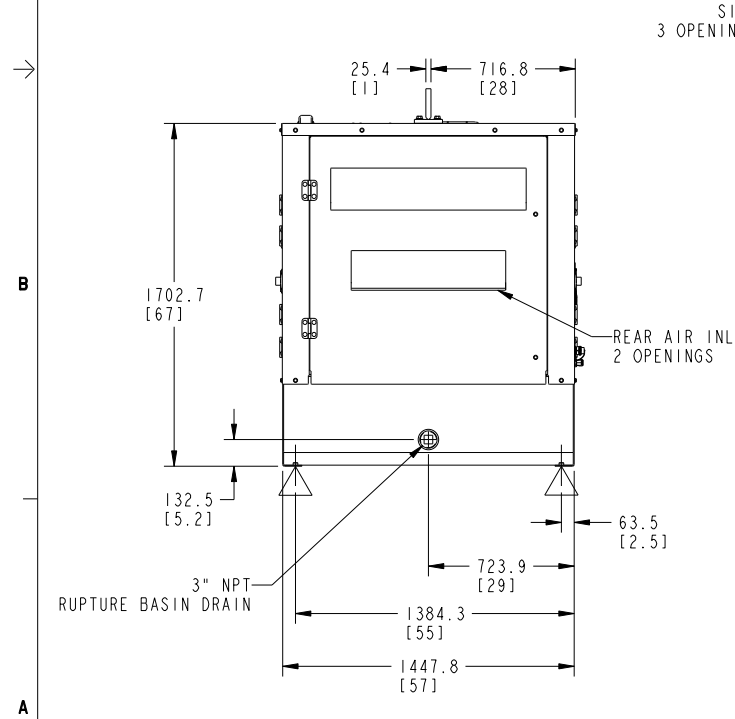


REL NO	LTR	NO	REVISION	OWN	CAD	APVD	DATE
ECO-142154	A	1	PRODUCTION RELEASE	JNR	MJK	E. SUTTERLIN	27MAR14



- NOTES:
- DIMENSIONS SHOWN IN [] ARE INCHES.
 - 5/8-11 UNC-2B INCH THREADED HOLES MARKED BY \triangle ARE PROVISIONS FOR SECURING TO A MOUNTING SURFACE.
 - SINGLE POINT LIFT WILL ACCOMMODATE A ϕ 76.2 [3] LIFTING DEVICE.
 - FLUID CAPACITIES:
ENGINE OIL: 15 LITERS (15.9 QUARTS)
COOLANT: 34.4 LITERS (9.1 GALLONS)
FUEL TANK: 939 LITERS (248 GALLONS)
 - EXHAUST OUTLET DIAMETER: 101.6 [4]
 - GENSET MASS:

	C150		C200	
	WITH FUEL	WITHOUT FUEL	WITH FUEL	WITHOUT FUEL
SKID MOUNTED	3110 KG [6860 LB]	3020 KG [6660 LB]	3310 KG [7300 LB]	3220 KG [7100 LB]
TRAILER MOUNTED	3840 KG [8470 LB]	3750 KG [8270 LB]	4040 KG [8910 LB]	3950 KG [8710 LB]

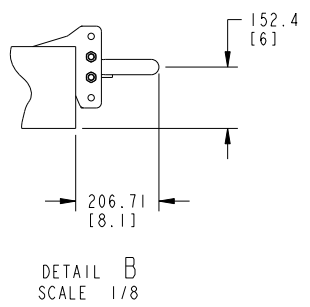
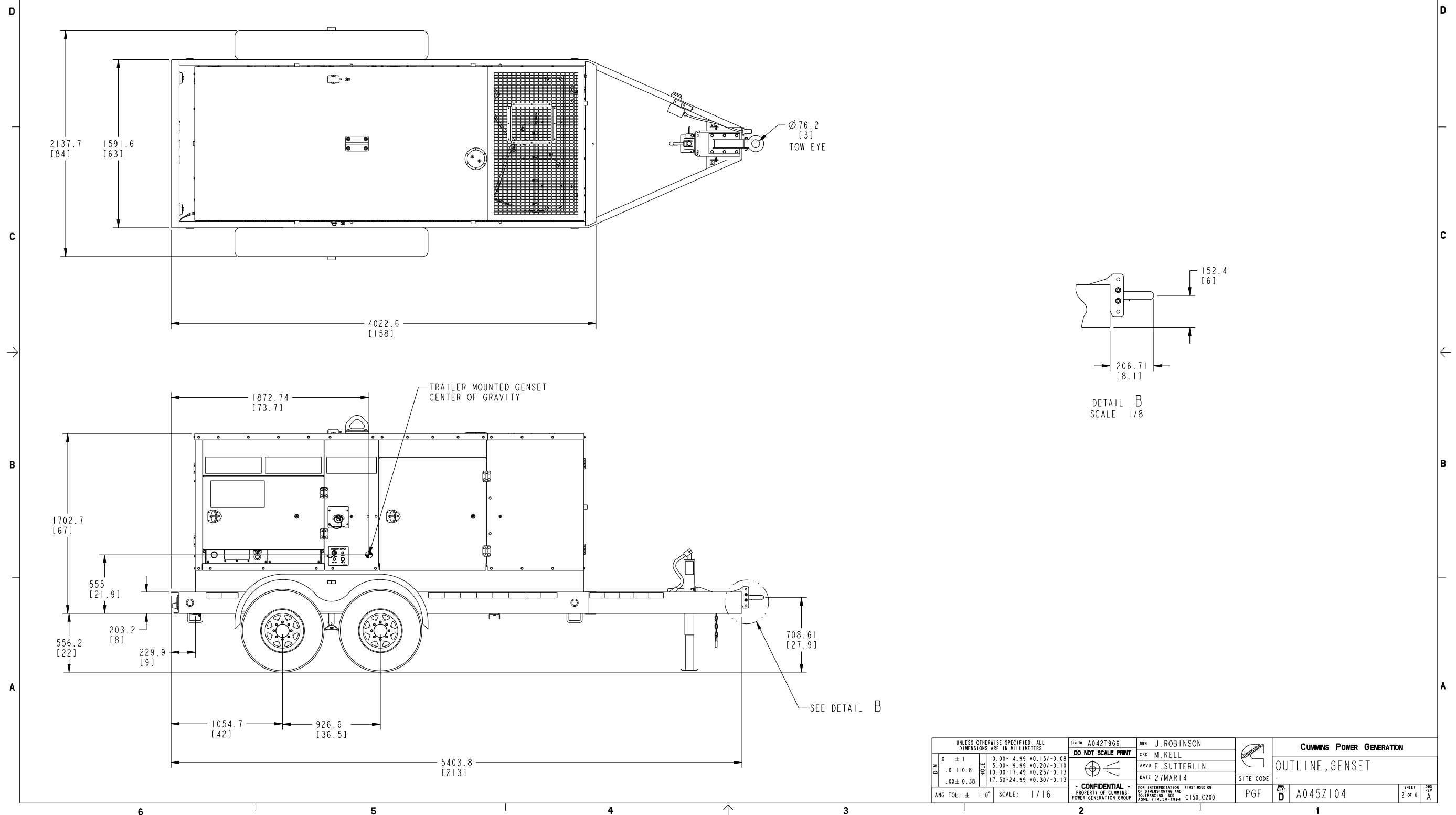


SKID MOUNTED GENSET (NO TRAILER)

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM 10 A042T966	OWN J. ROBINSON		CUMMINS POWER GENERATION	
DO NOT SCALE PRINT		DO NOT SCALE PRINT	CAD M. KELL		OUTLINE, GENSET	
X ± 1	0.00- 4.99 +0.15/-0.08		APVD E. SUTTERLIN		SITE CODE	SHEET 1 OF 4
.X ± 0.8	5.00- 9.99 +0.20/-0.10		DATE 27MAR14			
.XX ± 0.38	10.00-17.49 +0.25/-0.13		FIRST USED ON C150, C200			
ANG TOL: ± 1.0°	SCALE: 1/16	PROPERTY OF CUMMINS POWER GENERATION GROUP	PGF	REV D	A045Z104	REV A

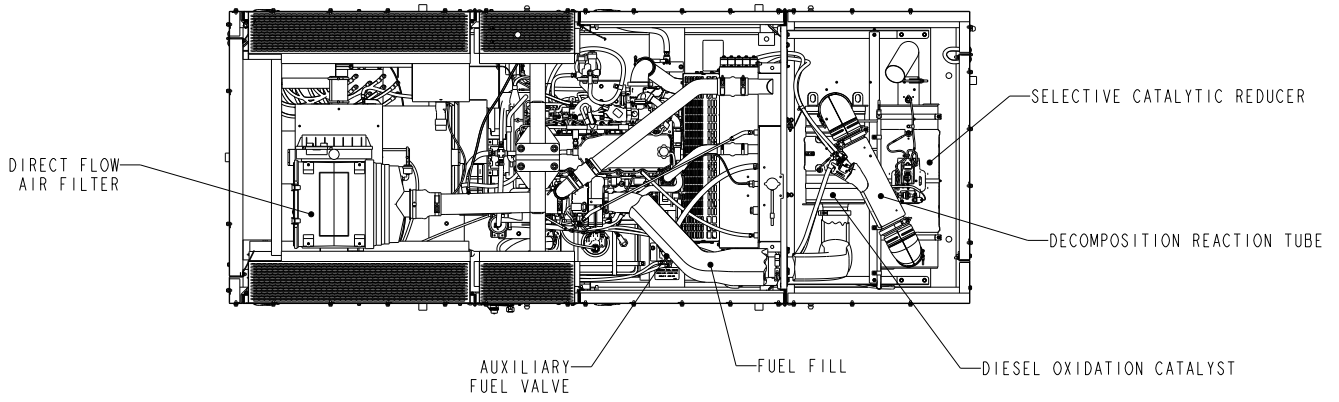
PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DRN	CAD	APVD	DATE
ECO-142154	A	1	PRODUCTION RELEASE	JNR	MJK	E. SUTTERLIN	27MAR14

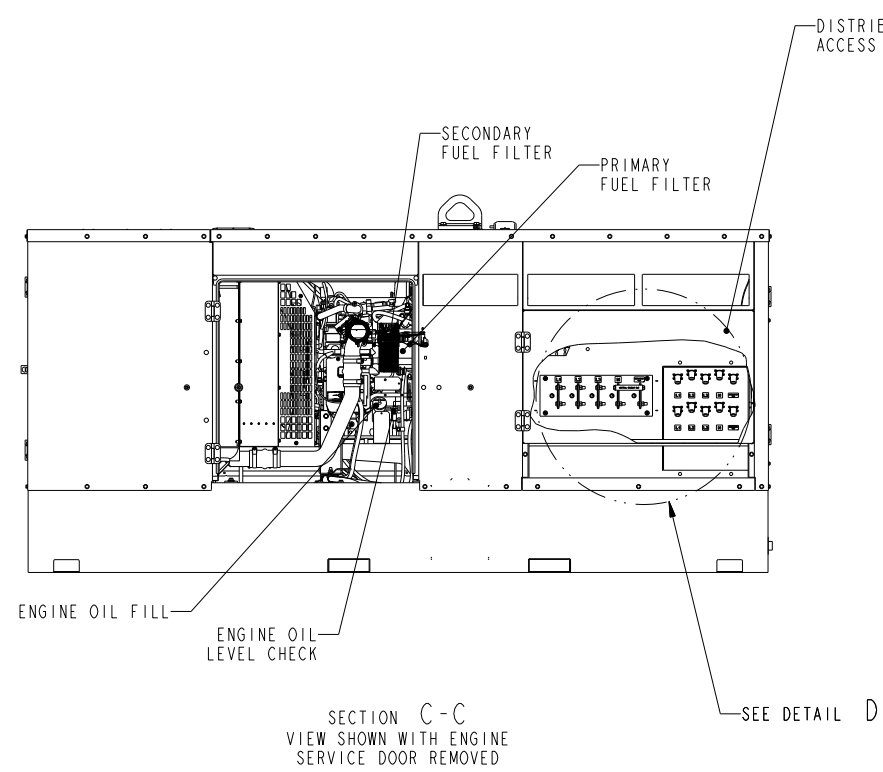


UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM 10 A0421966	DRN J. ROBINSON		CUMMINS POWER GENERATION	
DO NOT SCALE PRINT			CAD M. KELL		OUTLINE, GENSET	
DIM	X ± 1	0.00- 4.99 +0.15/-0.08	APVD E. SUTTERLIN	SITE CODE	PGF	SHEET 2 OF 4
	.X ± 0.8	5.00- 9.99 +0.20/-0.10	DATE 27MAR14			
	.XX ± 0.38	10.00-17.49 +0.25/-0.13				
ANG TOL: ± 1.0°		SCALE: 1/16	- CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP		FOR INTERPRETATION OF DIMENSIONS AND TOLERANCING, SEE ASME Y14.5M-1994	FIRST USED ON C150, C200
				PGF	D	A045Z104

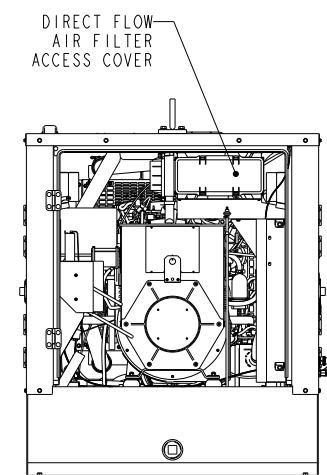
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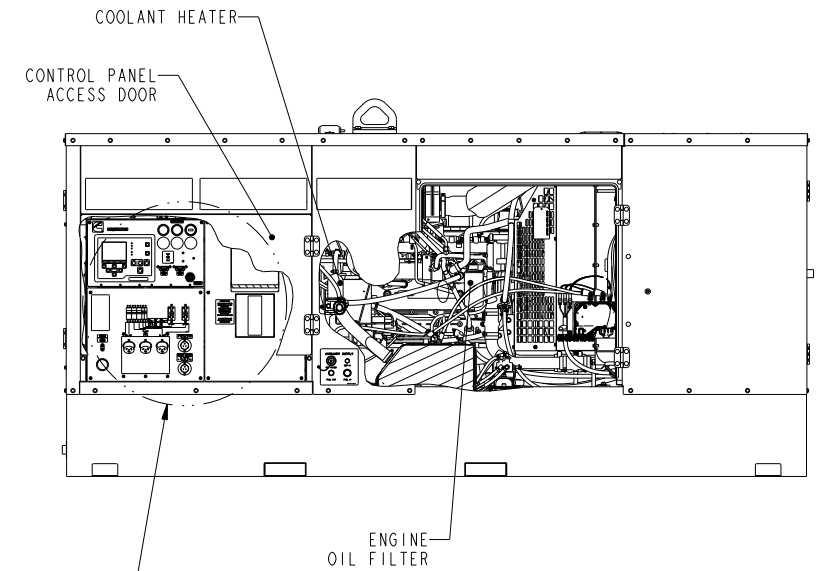
VIEW SHOWN WITH ENCLOSURE ROOF REMOVED



SECTION C-C
VIEW SHOWN WITH ENGINE SERVICE DOOR REMOVED



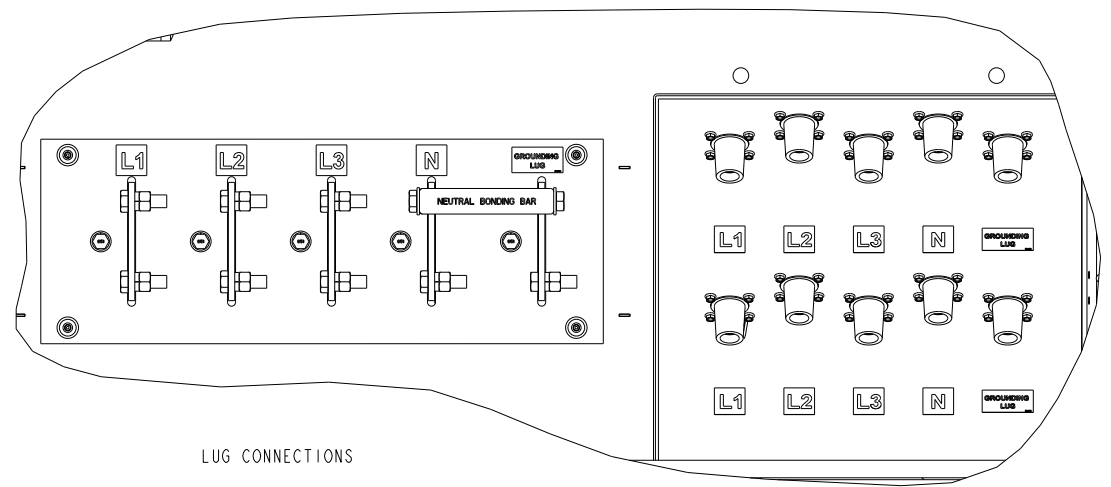
VIEW SHOWN WITH SERVICE ACCESS DOOR REMOVED



VIEW SHOWN WITH ENGINE SERVICE DOOR REMOVED

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM 10 A042T966	DRN J. ROBINSON		CUMMINS POWER GENERATION																																													
DO NOT SCALE PRINT			CAD M. KELL		OUTLINE, GENSET																																													
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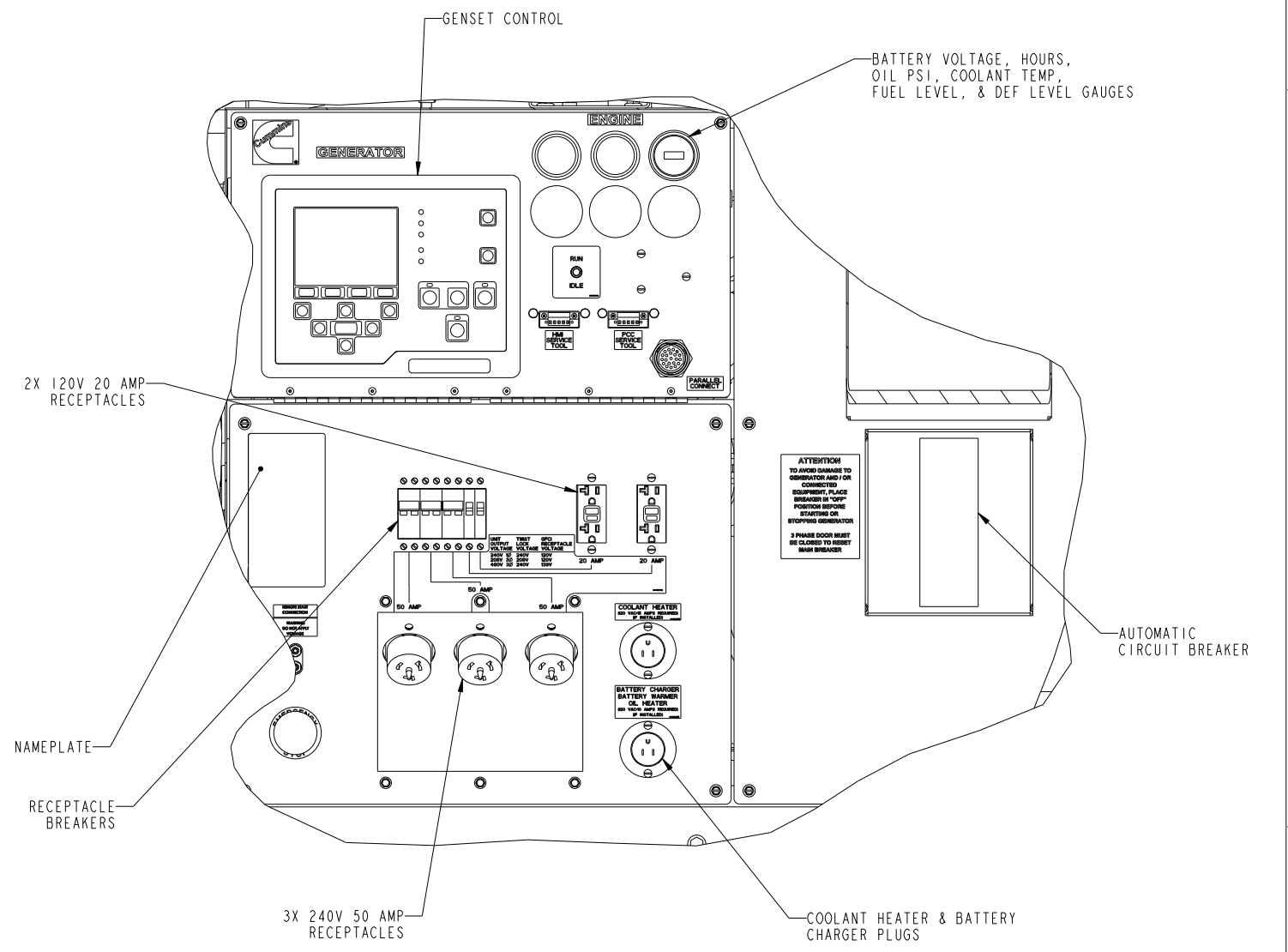
REL NO	LTR	NO	REVISION	ENR	CAD	APVD	DATE
ECO-142154	A	1	PRODUCTION RELEASE	JNR	MJB	SUTTERLIN	27MAR14



LUG CONNECTIONS

CAM LOCK CONNECTIONS

DETAIL D
SCALE 5/16
DISTRIBUTION PANEL
LOAD TERMINAL
CONNECTIONS



2X 120V 20 AMP RECEPTACLES

NAMEPLATE

RECEPTACLE BREAKERS

3X 240V 50 AMP RECEPTACLES

DETAIL E
SCALE 5/16
USER INTERFACE

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM 10 A042T966	ENR J. ROBINSON		CUMMINS POWER GENERATION																									
DO NOT SCALE PRINT		DO NOT SCALE PRINT	CAD M. KELL		OUTLINE, GENSET																									
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Pro/ENGINEER

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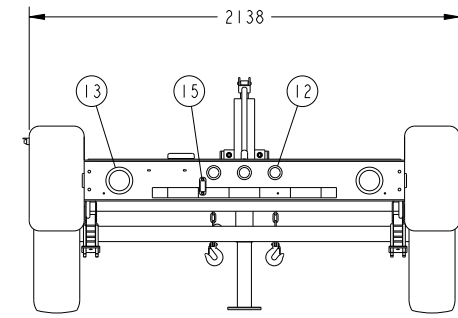
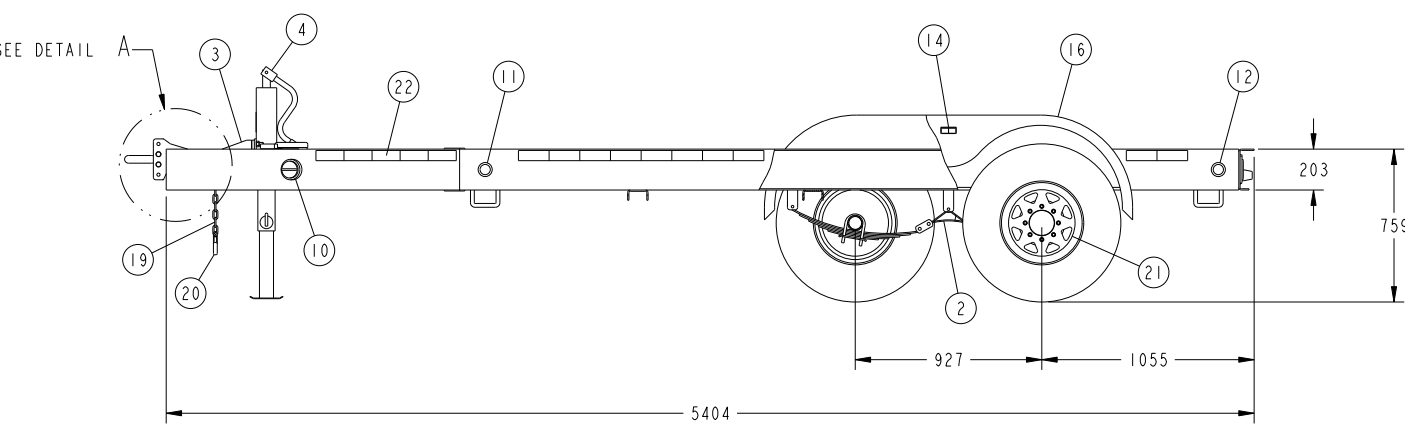
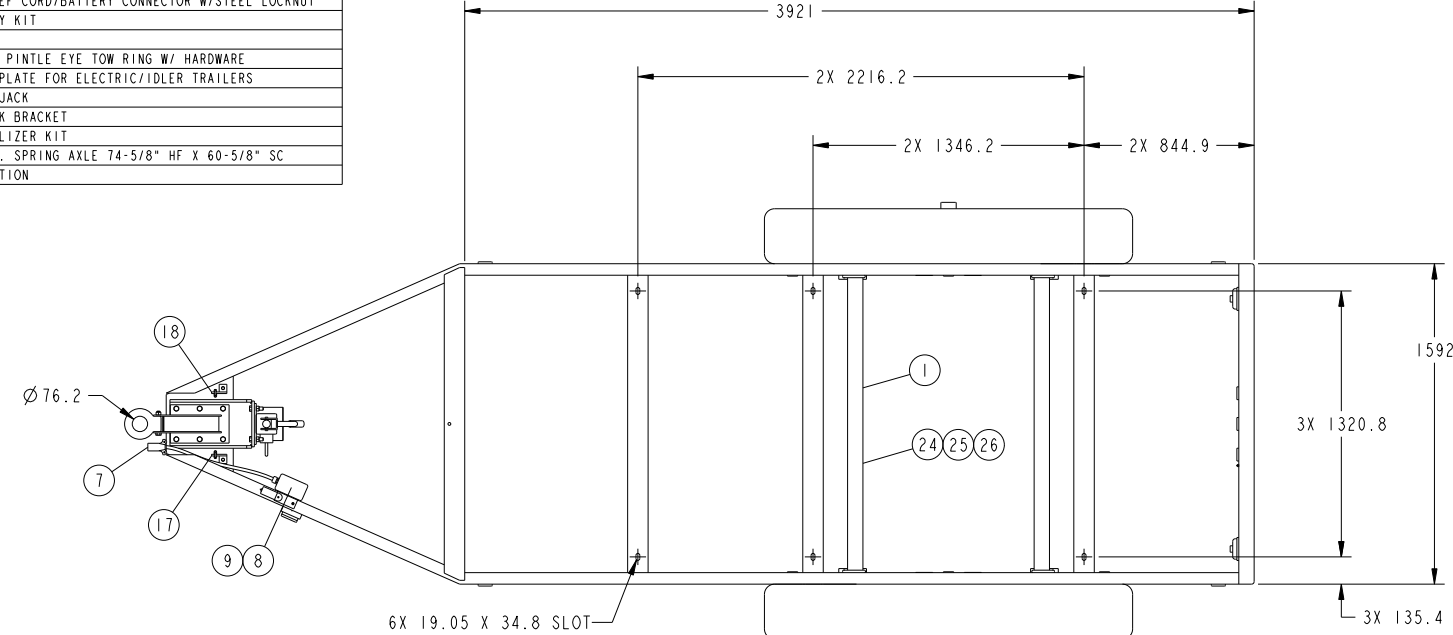
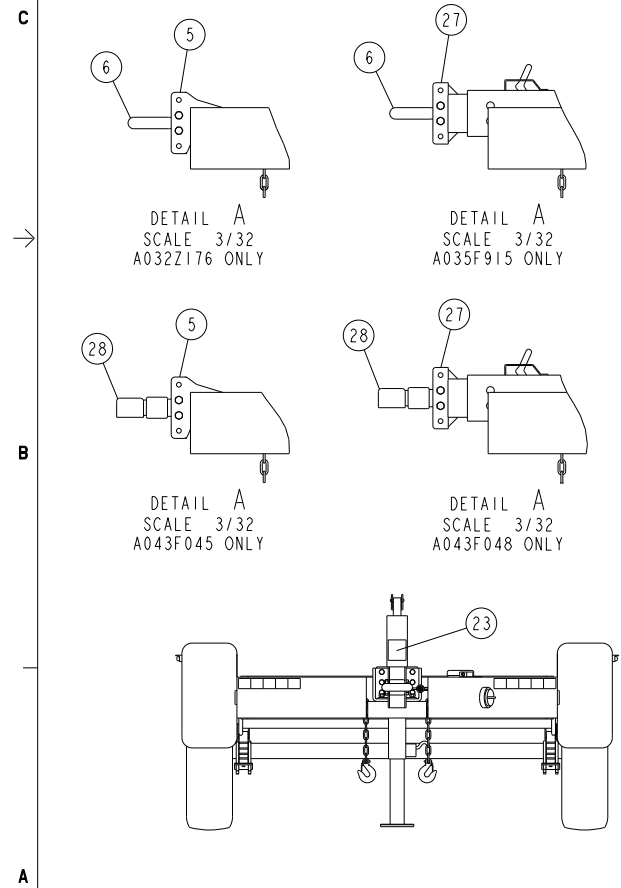
SUPPLIER TABLE FOR REFERENCE ONLY

1	-	1	-	28	1882000-14K	2-5/16" ADJUSTABLE COUPLER BALL HITCH 12,500 LBS W/ HARDWARE
1	1	-	-	27	DA20-8202022	DA20 HYDRAULIC ACTUATOR- 20K CAPACITY W/ MOUNT PLATE
1	1	-	-	26	B588	SINGLE HYDRAULIC FLEX HOSE FOR 9505 KIT
1	1	-	-	25	9505	HYD. LINE KIT FOR TANDEM AXLE
2	2	-	-	24	OGH74.625X60.625	6K STRAIGHT HYD. SPRING AXLE 74-5/8" HF X 60-5/8" SC
1	1	1	1	23	SD1112FG	SAFETY DECAL PACKAGE
20	20	20	20	22	31568	RED/WHITE REFLECTIVE DECAL
4	4	4	4	21	32696	BLACK RIMS ST235/85R16E 8 ON 6-1/2
2	2	2	2	20	385C/8016475	GRADE 43 3/8" CLEVIS SLIP HOOK
7.4	7.4	7.4	7.4	19	5041453	3/8" YELLOW ZINC GRADE 70 SAFETY CHAIN
1	1	1	1	18	134855	SAFETY CHAIN CONNECTOR FLAG (RIGHT)
1	1	1	1	17	134854	SAFETY CHAIN CONNECTOR FLAG (LEFT)
2	2	2	2	16	G2124-T/2712-72-14T	FENDER KIT
1	1	1	1	15	439K-M436	TAG LIGHT KIT
2	2	2	2	14	MC-67ARB	FENDER LIGHT
2	2	2	2	13	M826R-3	LED ROUND STOP/TAIL LIGHT W/ GROMMET & PLUG (4")
5	5	5	5	12	M162R	LED RED CLEARANCE LIGHT-SEALED W/ GROMMET & PLUG (2-1/2")
2	2	2	2	11	M162A	LED AMBER CLEARANCE LIGHT-SEALED W/ GROMMET & PLUG (2-1/2")
1	1	1	1	10	GT-1007	DOCUMENT HOLDER
-	-	-	-	9	TB2534/0700596	3/4" STRAIN RELIEF CORD/BATTERY CONNECTOR W/STEEL LOCKNUT
-	-	-	-	8	1026	BATTERY/BREAKAWAY KIT
1	1	1	1	7	12-706	7-POLE FLAT PLUG
-	-	-	-	6	834216GT/161376-38/9093	3" POWDER COATED PINTLE EYE TOW RING W/ HARDWARE
-	-	-	-	5	MD4923	UNIVERSAL HITCH PLATE FOR ELECTRIC/IDLER TRAILERS
1	1	1	1	4	182304/134849-4	10,000# DROPLEG JACK
1	1	1	1	3	134849	CENTER MOUNT JACK BRACKET
1	1	1	1	2	HGR-248-00/A/P-264-00	AXLE HANGER/EQUALIZER KIT
-	-	-	-	1	DGE74.625X60.625	6K STRAIGHT ELEC. SPRING AXLE 74-5/8" HF X 60-5/8" SC
A043F048	A035F915	A043F045	A032Z176	ITEM NO.	SUPPLIER PART NO.	SUPPLIER DESCRIPTION

REL NO	LTR	NO	REVISION	OWN	CAD	APVD	DATE
ECO-129908	A	1	PRODUCTION RELEASE A043F045 & A043F048	BBK	RPL	R LUNDGREN	04DEC12
		2	DRAWING CREATED FOR EXISTING PARTS A032Z176 & A035F915	BBK	RPL	R LUNDGREN	04DEC12

NOTES:

1. THIS PART IS MANUFACTURER SOURCE CONTROLLED.
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY.
3. TRAILER COMPLIANT WITH APPLICABLE REGULATIONS:
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL MOTOR VEHICLE SAFETY STANDARDS
CODE OF FEDERAL REGULATIONS
4. 7-POLE CONNECTOR FOR LIGHTING & BRAKES.
5. TRAILER RATED FOR 4531 KG (9990 LBS).



TABULATION		
PART NUMBER	CURRENT_ER	DESCRIPTION
A032Z176	ECO-129908	ELECTRIC BRAKES, PINTLE HITCH
A043F045	ECO-129908	ELECTRIC BRAKES, BALL HITCH
A035F915	ECO-129908	HYDRAULIC BRAKES, PINTLE HITCH
A043F048	ECO-129908	HYDRAULIC BRAKES, BALL HITCH

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM 10	OWN B KALLIES		CUMMINS POWER GENERATION	
DO NOT SCALE PRINT		DO NOT SCALE PRINT	CND R LUNDGREN		TRAILER	
X ±	0.00- 4.99 +0.15/-0.08		APVD R LUNDGREN	SITE CODE	PGF	SHEET 1 OF 1
.X ±	5.00- 9.99 +0.20/-0.10		DATE 08OCT12			
.XX ±	10.00-17.49 +0.25/-0.13		FIRST USED ON C150,C200			
ANG TOL: ±	1.0°	SCALE: 1/16	CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP	PGF	D	A035F916