PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DRN	CKD	APVD	DATE
ECO-152302	C	1	RMV REBAR REINFORDED FROM NOTE 7	RAH	ELN	E.NORDSTROM	05MAY15
		2	ADD NOTE 15	RAH	ELN	E.NORDSTROM	05MAY15
		3	SEE SHEET 2	RAH	ELN	E.NORDSTROM	05MAY15
		4	SEE SHEET 2	RAH	ELN	E.NORDSTROM	05MAY15
		5	SEE SHEET 2	RAH	ELN	E.NORDSTROM	05MAY15
		6	SEE SHEET 2	RAH	ELN	E.NORDSTROM	05MAY15
		7	SEE SHEET 2	RAH	ELN	E.NORDSTROM	05MAY15
		8	SEE SHEET 2	RAH	ELN	E.NORDSTROM	05MAY15
		9	SEE SHEET 4	RAH	ELN	E.NORDSTROM	05MAY15
		10	SEE SHEET 4	RAH	ELN	E.NORDSTROM	05MAY15

SEISMIC INSTALLATIONS NOTES:

1. THE DESIGN OF POST-INSTALLED ANCHORS IN CONCRETE USED FOR THE COMPONENT ANCHORAGE IS PRE-QUALIFIED FOR SEISMIC APPLICATIONS IN ACCORDANCE WITH "ACI 355.2-07" AND DOCUMENTED IN A REPORT BY A REPUTABLE TESTING AGENCY. (EX. THE EVALUATION SERVICE REPORT ISSUED BY THE INTERNATIONAL CODE COUNCIL)

2. ANCHORS MUST BE INSTALLED TO AN EMBEDMENT DEPTH AS RECOMMENDED IN THE PRE-QUALIFICATION TEST REPORT AS DEFINED IN NOTE 1. FOR "CBC 2013" APPLICATIONS.

3. ANCHORS MUST BE INSTALLED IN MINIMUM 3000 PSI COMPRESSIVE STRENGTH NORMAL WEIGHT STRUCTURAL CONCRETE. CONCRETE AGGREGATE MUST COMPLY WITH "ASTM C33".

4. ANCHORS MUST BE INSTALLED TO THE TORQUE SPECIFICATION AS RECOMMENDED BY THE ANCHOR MANUFACTURER.

5. ANCHORS MUST BE INSTALLED IN LOCATIONS SPECIFIED ON THIS INSTALLATION DRAWING.

6. WASHERS MUST BE INSTALLED AT EACH ANCHOR LOCATION BETWEEN THE ANCHOR HEAD AND EQUIPMENT FOR TENSION LOAD DISTRIBUTION. WASHERS MUST BE TYPE A OR B PLAIN WASHERS MEETING ASME B18.21.1-2009. WASHER SIZE TO MATCH ANCHOR DIAMETER.

7. CONCRETE FLOOR SLAB AND CONCRETE HOUSEKEEPING PADS MUST BE DESIGNED FOR SEISMIC APPLICATIONS IN ACCORDANCE WITH "ACI 318-11".

8. ALL HOUSEKEEPING PAD THICKNESSES MUST BE DESIGNED IN ACCORDANCE WITH THE PRE-QUALIFICATION TEST REPORT AS DEFINED IN NOTE 1 OR A MINIMUM OF 1.5X THE ANCHOR EMBEDMENT DEPTH, WHICHEVER IS LARGEST (UNLESS NOTED OTHERWISE).

9. ALL HOUSEKEEPING PADS MUST BE DOWELLED OR CAST INTO THE BUILDING STRUCTURAL FLOOR SLAB AND DESIGNED FOR SEISMIC APPLICATION PER "ACI 318-11" AND AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

10. FLOOR MOUNTED EQUIPMENT (WITH OR WITHOUT A HOUSEKEEPING PAD) MUST BE INSTALLED TO A STEEL REINFORCED STRUCTURAL CONCRETE FLOOR THAT IS SEISMICALLY DESIGNED AND APPROVED BY THE ENGINEER OF RECORD TO RESIST ALL LOADS FROM EQUIPMENT BEING ANCHORED TO THE FLOOR.

11. COORDINATE REINFORCEMENT OF SUPPORT STRUCTURE WITH EQUIPMENT ANCHOR LOCATIONS.

12. ATTACHING SEISMIC CERTIFIED EQUIPMENT TO FLOOR OTHER THAN THOSE DESIGNED TO ACCEPT THE SEISMIC LOADS FROM CERTIFIED EQUIPMENT BY THE STRUCTURAL ENGINEER OF RECORD IS PROHIBITED.

13. INSTALLATION ONTO A STEEL ROOF STRUCTURE OR MANUFACTURED STEEL CURB SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER OF RECORD.

14. CONNECTIONS TO THE EQUIPMENT, INCLUDING BUT NOT LIMITED TO CONDUIT, WIRING FROM CABLE TRAYS, OTHER ELECTRICAL SERVICES OR OTHER CONNECTIONS, ARE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND BEYOND THE SCOPE OF THIS DOCUMENT. FLEXIBLE ATTACHMENTS MUST BE USED FOR SEISMIC CONNECTIONS TO ISOLATED COMPONENTS OR ISOLATED EQUIPMENT. THE FLEXIBLE ATTACHMENT MUST PROVIDE FOR ENOUGH RELATIVE DISPLACEMENT TO REMAIN CONNECTED TO THE EQUIPMENT AND FUNCTIONAL DURING AND AFTER A SEISMIC EVENT.

15. REFER TO GENSET OUTLINE DRAWINGS FOR WEIGHT, CG AND CONFIGURATION SPECIFICS.

-THIS IS A CONTROLLED ITEM-
PER CPG PROCEDURE FRE-1002
TO MAINTAIN COMPLIANCE WITH REQUIREMENTS OF THE CODES, STANDARDS, OR AGENCIES LISTED BELOW
☐ CSA ☐ UL ☐ CE ☐ RVIA ☐ ABYC
☒ IBC ☒ OTHER OSHPD ☐ OTHER
CHANGES, DEVIATIONS, OR SUBSTITUTIONS OF MATERIAL, PROCESS, OR PERFORMANCE OF THIS ITEM MUST BE APPROVED BY THE FOLLOWING CONTROLLED ITEM APPROVER
RESPONSIBLE C/A ROLE SEISMIC
RESPONSIBLE C/A ROLE
RESPONSIBLE C/A ROLE

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS

DIM		HOLE
X	± 1	0.00- 4.99 +0.15/-0.08
.X	± 0.8	5.00- 9.99 +0.20/-0.10
.XX	± 0.38	10.00-17.49 +0.25/-0.13
		17.50-24.99 +0.30/-0.13

ANG TOL: ± 1.0° SCALE: 1/1

SIM TO NONE
DO NOT SCALE PRINT
- CONFIDENTIAL -
PROPERTY OF CUMMINS POWER GENERATION GROUP

DRN D HOFMEISTER
CKD D HOFMEISTER
APVD E NORDSTROM
DATE 28FEB15
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
FIRST USED ON ARROW

SITE CODE PGF

CUMMINS POWER GENERATION
INSTALLATION, GENSET
SEISMIC REQUIREMENTS

DWG SIZE D | A051N157 | SHEET 1 OF 4 | DWG REV C

Drawing Name: A051N158 Revision: C
Part Name: A051N157 Revision: C
Sheet 1 of 5

PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DRN	CKD	APVD	DATE
ECO-152302	C	3	ADD NOTE TYPE---RECORD.	RAH	ELN	E.NORDSTROM	05MAY15
		4	RMV ATTACHMENT TO STEEL COLUMN FROM TABLE	RAH	ELN	E.NORDSTROM	05MAY15
		5	ZONE D5,ADD VALUES TO EVALUATION PARAMETERS	RAH	ELN	E.NORDSTROM	05MAY15
		6	ZONE C4,GRADE/ROOF WAS ROOF	RAH	ELN	E.NORDSTROM	05MAY15
		7	ZONE B3,ADD VALUES TO EVALUATION PARAMETERS	RAH	ELN	E.NORDSTROM	05MAY15
		8	ZONE B3,ASTM A325N OR A490 WAS 307	RAH	ELN	E.NORDSTROM	05MAY15

GRADE MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO CONCRETE					
		EVALUATION PARAMETERS	CONCRETE ANCHORS	ANCHOR EMBEDMENT	ANCHOR SPACING	DISTANCE TO NEAREST EDGE	CONCRETE SLAB THICKNESS
C45 N6 C50 N6 C60 N6 C70 N6 C80 N6 C100 N6	GENERATOR SET WITH OR WITHOUT ENCLOSURE	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 1.0 Ω = 2.5	SEE NOTE				

NOTE: TYPE OF ANCHOR, ANCHOR ATTACHMENT SPECIFICS AND MINIMUM SLAB THICKNESS TO BE DESIGNED BY ENGINEER OF RECORD.

GRADE/ROOF MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO STEEL	
		EVALUATION PARAMETERS	STEEL BOLTS
C45 N6 C50 N6 C60 N6 C70 N6 C80 N6 C100 N6	GENERATOR SET WITH OR WITHOUT ENCLOSURE	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h <= 1.0	(QTY 4) 5/8" DIAMETER ASTM A325N OR A490 BOLTS WITH WASHERS THROUGH THE BASE RAIL MOUNTING HOLES.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS

DIM: X ± 1; .X ± 0.8; .XX± 0.38

HOLE: 0.00- 4.99 +0.15/-0.08; 5.00- 9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13

ANG TOL: ± 1.0°

SCALE: 1/1

SIM TO NONE

DO NOT SCALE PRINT

- CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP

DRN D HOFMEISTER

CKD D HOFMEISTER

APVD E NORDSTROM

DATE 28FEB15

FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994

FIRST USED ON ARROW

SITE CODE PGF

CUMMINS POWER GENERATION

INSTALLATION, GENSET

SEISMIC REQUIREMENTS

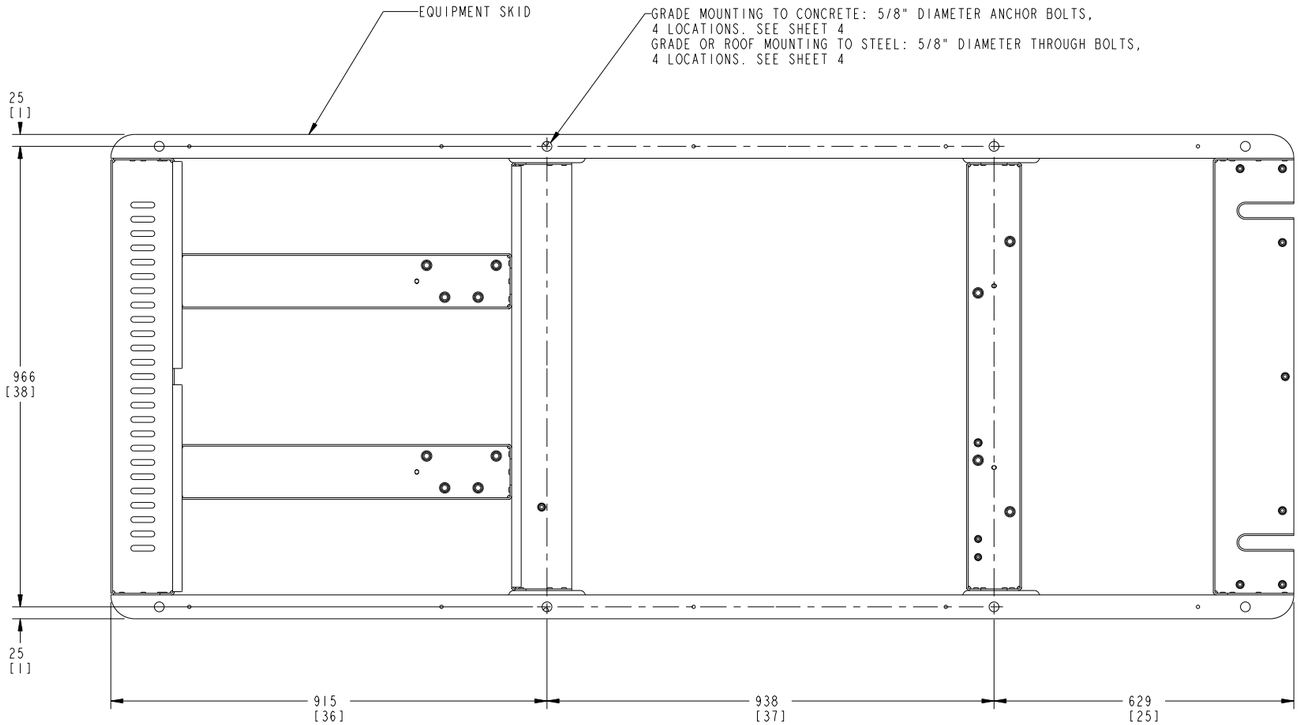
DWG SIZE D | A051N157 | SHEET 2 of 4 | DWG REV C

Drawing Name: A051N158 Revision: C
Part Name: A051N157 Revision: C
Sheet 2 of 5

PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DRN	CKD	APVD	DATE
ECO-152302	C	-	---	RAH	ELN	E_NORDSTROM	05MAY15

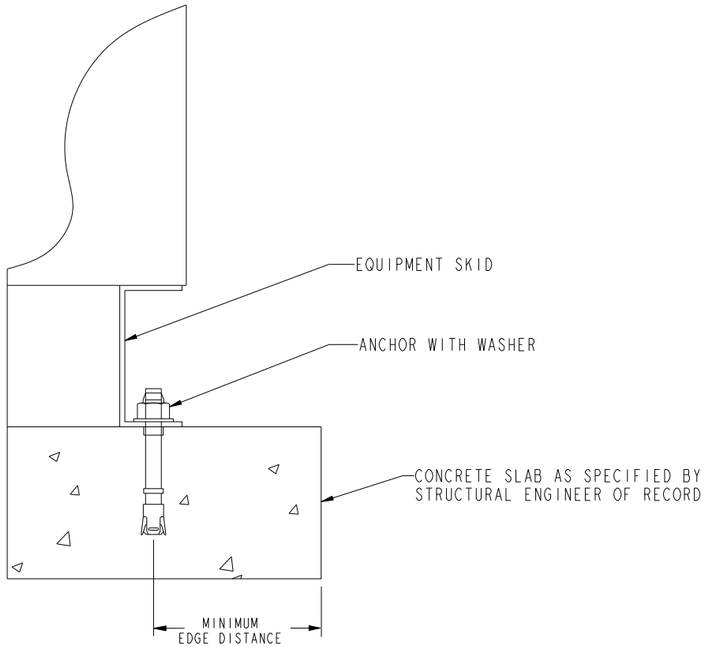
MOUNTING HOLE LOCATIONS



UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS			SIM TO NONE	DRN D HOFMEISTER	CUMMINS POWER GENERATION	
DIM: X ± 1, .X ± 0.8, .XX ± 0.38	HOLE: 0.00- 4.99 +0.15/-0.08; 5.00- 9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13		DO NOT SCALE PRINT	CKD D HOFMEISTER		
			- CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP	APVD E NORDSTROM	SITE CODE	INSTALLATION, GENSET SEISMIC REQUIREMENTS
				DATE 28FEB15		
ANG TOL: ± 1.0°	SCALE: 1/1		FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994	FIRST USED ON ARROW	PGF	DWG SIZE D · A051N157 · SHEET 3 of 4 · DWG REV C

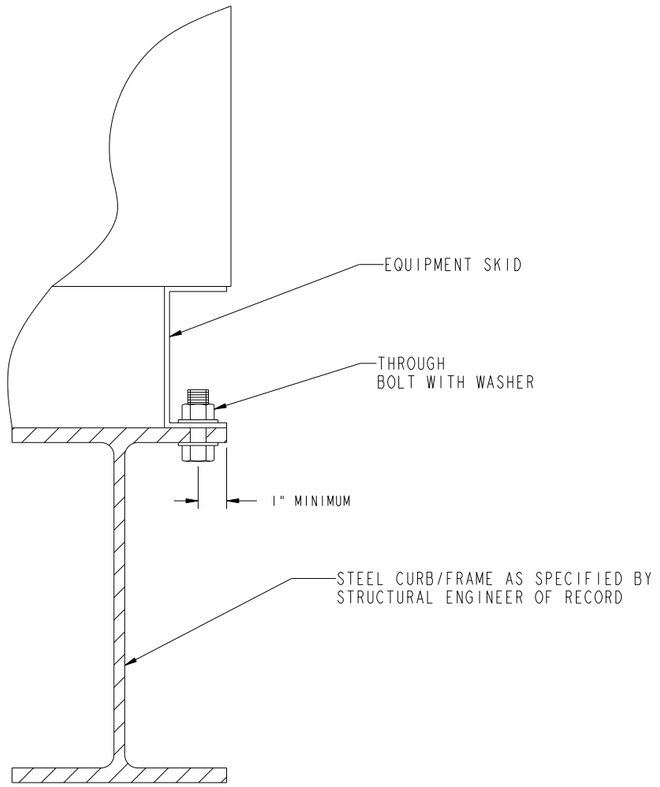
PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DRN	CKD	APVD	DATE
ECO-152302	C	9	ZONE A5,WAS REFER---LOCATION	RAH	ELN	E.NORDSTROM	05MAY15
		10	ZONE C2,WAS EQUIPMENT---MOUNT	RAH	ELN	E.NORDSTROM	05MAY15



TO BE DESIGNED BY ENGINEER OF RECORD

CONCRETE CONNECTION



STEEL CONNECTION

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS

DIM: X ± 1; .X ± 0.8; .XX± 0.38

HOLE: 0.00- 4.99 +0.15/-0.08; 5.00- 9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13

ANG TOL: ± 1.0° | SCALE: 1/1

SIM TO NONE | DO NOT SCALE PRINT

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DRN D HOFMEISTER | CKD D HOFMEISTER | APVD E NORDSTROM | DATE 28FEB15

FOR INTERPRETATION OF DIMENSIONS AND TOLERANCING, SEE ASME Y14.5M-1994 | FIRST USED ON ARROW

SITE CODE PGF

CUMMINS POWER GENERATION

INSTALLATION,GENSET
SEISMIC REQUIREMENTS

DWG SIZE D | A051N157 | SHEET 4 OF 4 | DWG REV C

Drawing Name: A051N158 Revision: C
Part Name: A051N157 Revision: C
Sheet 4 of 5

Part A051N157 C

Description	Legacy Name	External Regulations	Application Status	Release Phase Code	Security Classification	Alternates
INSTALLATION,GENSET	A051N157	IBC,OSHPD	Production Only	Production	Proprietary	

Part Specifications :A051N157 C

Name	Description	Legacy Name
A030B356	SPECIFICATION,MATERIAL	CES10903
A051N158	DRAWING,ENGINEERING	A051N158