PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DWN	CKD	APVD	DATE
ECO-166360	G	1	ZONE A3, RMV C11 LABEL	MN	JP	J.BUTLER	25NOV16
		2	SEE SHEET 6	MN	JP	J.BUTLER	25NOV16

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 AND REBAR REINFORCED 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. (NOTE REMOVED)

11. 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.

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

13. 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.

14. (NOTE REMOVED)

15. (NOTE REMOVED)

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

17. (NOTE REMOVED)

18. 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.

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
DWN T_ABEL
CKD T_SORENSON
APVD D_GILLETT
DATE 18JAN13
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994 | FIRST USED ON ALL
SITE CODE PGF
CUMMINS POWER GENERATION
INSTALLATION, GENSET
SEISMIC REQUIREMENTS
DWG SIZE D | A044H911 | SHEET 1 of 7 | DWG REV G

Regulatory Review and Approval is required prior to changing this item per PGG 1-01-01-116. This item impacts compliance with these External Regulations: IBC,OSHPD

Drawing Name: A044H912 Revision: G
Part Name: A044H911 Revision: G
ECO-166360 Sheet 1 of 8

PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DWN	CKD	APVD	DATE
ECO-166360	G	--	--	MN	JP	J.BUTLER	25NOV16

GRADE MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO STEEL		ATTACHMENT TO CONCRETE					
		EVALUATION PARAMETERS	STEEL BOLTS	EVALUATION PARAMETERS	CONCRETE ANCHORS	ANCHOR EMBEDMENT	ANCHOR SPACING	DISTANCE TO NEAREST EDGE	CONCRETE SLAB THICKNESS
C20 N6 C22 N6 C25 N6 C30 N6 C36 N6 C40 N6 C30 N6H C36 N6H C40 N6H C45 N6H C50 N6H C60 N6H	GENERATOR SET WITH OR WITHOUT ENCLOSURE	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 0	(QTY 4) 5/8" DIAMETER ASTM 307 BOLTS WITH WASHER THROUGH THE BASE RAIL MOUNTING HOLES.	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 0 Ω = 2.5	(QTY 4) 5/8" DIAMETER HILTI KB-TZ EXPANSION ANCHORS (ICC-ESR-1917) WITH WASHERS THROUGH BASE RAIL MOUNTING HOLES.	3-1/8" MINIMUM	4-3/4" MINIMUM	6" MINIMUM	5" MINIMUM

ROOF MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO STEEL	
		EVALUATION PARAMETERS	STEEL BOLTS
C20 N6 C22 N6 C25 N6 C30 N6 C36 N6 C40 N6 C30 N6H C36 N6H C40 N6H C45 N6H C50 N6H C60 N6H	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	(QTY 4) 5/8" DIAMETER ASTM 307 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

DWN T_ABEL
CKD T_SORENSON
APVD D_GILLETT
DATE 18JAN13
FOR INTERPRETATION OF DIMENSIONS AND TOLERANCING, SEE ASME Y14.5M-1994
FIRST USED ON ALL

SITE CODE PGF

CUMMINS POWER GENERATION
INSTALLATION, GENSET
SEISMIC REQUIREMENTS
DWG SIZE D | A044H911 | SHEET 2 OF 7 | DWG REV G

Regulatory Review and Approval is required prior to changing this item per PGG 1-01-01-116. This item impacts compliance with these External Regulations: IBC,OSHPD

Drawing Name: A044H912 Revision: G
Part Name: A044H911 Revision: G
ECO-166360 Sheet 2 of 8

PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DWN	CKD	APVD	DATE
ECO-166360	G	--	--	MN	JP	J.BUTLER	25NOV16

GRADE MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO STEEL		ATTACHMENT TO CONCRETE					
		EVALUATION PARAMETERS	STEEL BOLTS	EVALUATION PARAMETERS	CONCRETE ANCHORS	ANCHOR EMBEDMENT	ANCHOR SPACING	DISTANCE TO NEAREST EDGE	CONCRETE SLAB THICKNESS
C10 D6 C15 D6 C20 D6 C25 D6 C30 D6 C35 D6 C40 D6 C50 D6 C60 D6	GENERATOR SET WITH OR WITHOUT ENCLOSURE NO FUEL TANK	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 0	(QTY 4) 5/8" DIAMETER ASTM A490 BOLTS WITH WASHERS THROUGH BASE RAIL MOUNTING HOLES.	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 0 Ω = 2.5	(QTY 4) 5/8" DIAMETER HILTI KB-TZ EXPANSION ANCHORS (ICC-ESR-1917) WITH WASHERS THROUGH BASE RAIL MOUNTING HOLES.	4" MINIMUM	4.25" MINIMUM	6" MINIMUM	6" MINIMUM

ROOF MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO STEEL		
		EVALUATION PARAMETERS		STEEL BOLTS
C10 D6 C15 D6 C20 D6 C25 D6 C30 D6 C35 D6 C40 D6 C50 D6 C60 D6	GENERATOR SET WITH OR WITHOUT ENCLOSURE, WITH FUEL TANK. FUEL TANKS: A045T328, A045T334, A045T336, A045T330, A045T332, A045D209	GRADE MOUNTED CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 0	ROOF MOUNTED CBC 2013/IBC 2012 Sds <= 2.0 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h <= 1	(QTY 4) 5/8" DIAMETER ASTM A490 BOLTS WITH WASHERS THROUGH BASE RAIL MOUNTING HOLES OR FUEL TANK MOUNTING HOLES
C25 D6 C30 D6 C35 D6 C40 D6 C50 D6 C60 D6	GENERATOR SET WITH OR WITHOUT ENCLOSURE, WITH FUEL TANK. FUEL TANKS: A045T340, A045T342, A045T344, A046U786, A046U828	GRADE MOUNTED CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 0	ROOF MOUNTED CBC 2013/IBC 2012 Sds <= 2.0 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h <= 1	(QTY 6) 5/8" DIAMETER ASTM A490 BOLTS WITH WASHERS THROUGH BASE RAIL MOUNTING HOLES OR FUEL TANK 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
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994. FIRST USED ON ALL

DWN T_ABEL
CKD T_SORENSON
APVD D_GILLETT
DATE 18JAN13

SITE CODE PGF

CUMMINS POWER GENERATION
INSTALLATION,GENSET
SEISMIC REQUIREMENTS
DWG SIZE D | A044H911 | SHEET 3 of 7 | DWG REV G

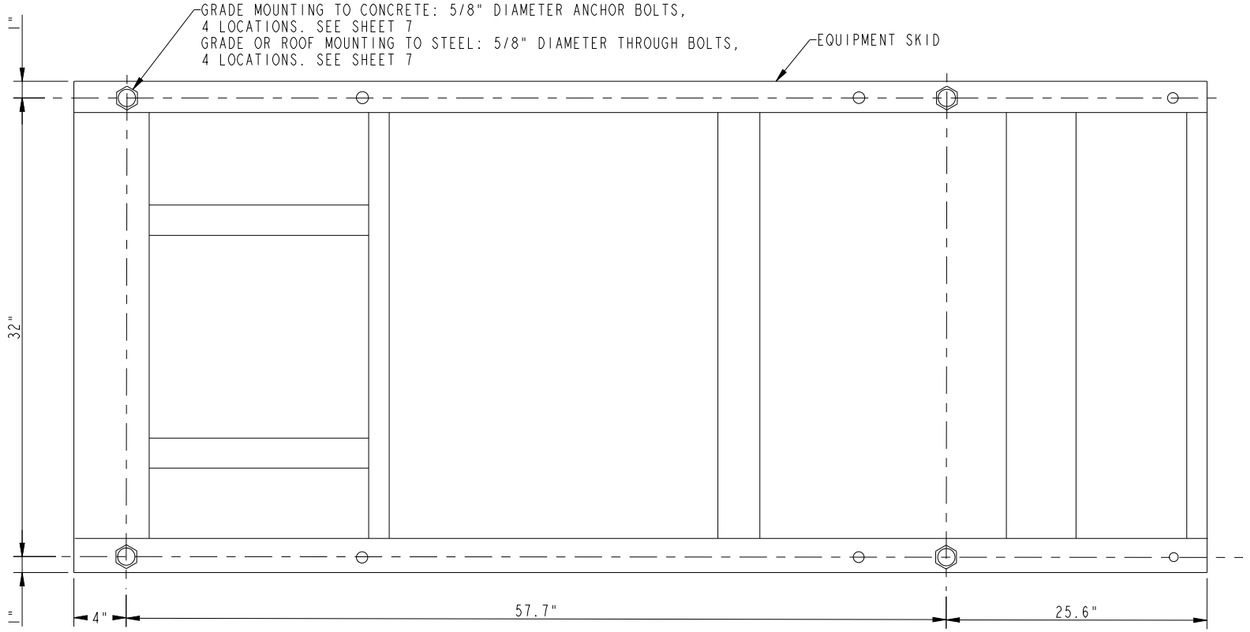
Regulatory Review and Approval is required prior to changing this item per PGG 1-01-01-116. This item impacts compliance with these External Regulations: IBC,OSHPD

PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DWN	CKD	APVD	DATE
ECO-166360	G	--	--	MN	JP	J.BUTLER	25NOV16

MOUNTING HOLE LOCATIONS

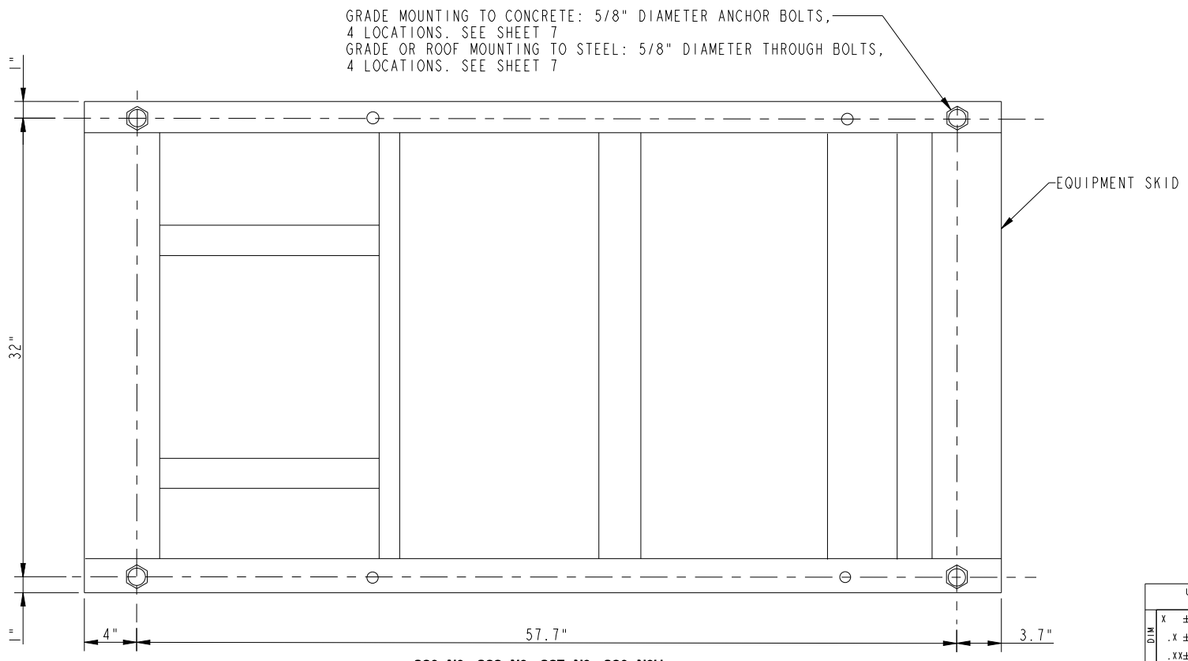
CONTROL END



C30 N6, C36 N6, C40 N6, C36 N6H, C40 N6H, C45 N6H, C50 N6H, C60 N6H

MOUNTING HOLE LOCATIONS

CONTROL END



C20 N6, C22 N6, C25 N6, C30 N6H

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

DWN	T_ABEL
CKD	T_SORENSON
APVD	D_GILLETT
DATE	18JAN13

FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994 — FIRST USED ON: ALL

CUMMINS POWER GENERATION

INSTALLATION, GENSET
SEISMIC REQUIREMENTS

SITE CODE: PGF

DWG SIZE: D — A044H911 — SHEET 4 OF 7 — DWG REV: G

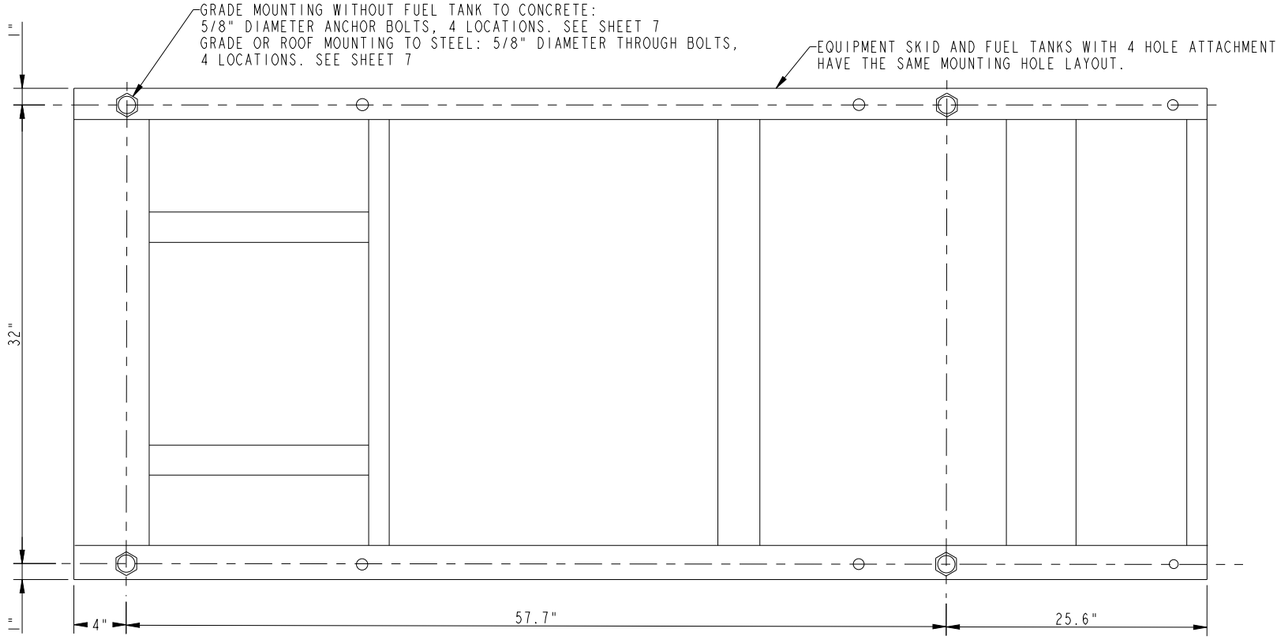
Regulatory Review and Approval is required prior to changing this item per PGG 1-01-01-116. This item impacts compliance with these External Regulations: IBC,OSHPD

PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DWN	CKD	APVD	DATE
ECO-166360	G	--	--	MN	JP	J.BUTLER	25NOV16

MOUNTING HOLE LOCATIONS

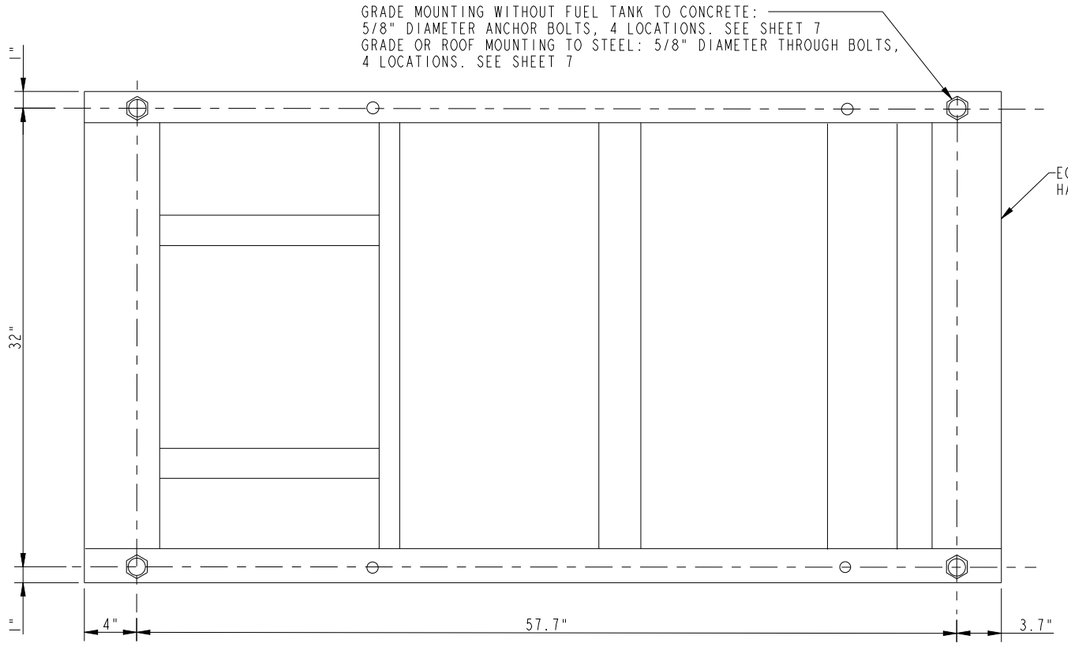
CONTROL END



C25 D6, C30 D6, C35 D6, C40 D6, C50 D6, C60 D6

MOUNTING HOLE LOCATIONS

CONTROL END



C10 D6, C15 D6, C20 D6

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS			SIM TO NONE	DWN T_ABEL	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 T_SORENSON	INSTALLATION, GENSET SEISMIC REQUIREMENTS
ANG TOL: ± 1.0°	SCALE: 1/1		- CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP	APVD D_GILLETT	
				DATE 18JAN13	SITE CODE: PGF
				FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994	FIRST USED ON: ALL
					DWG SIZE: D — A044H911 — SHEET 5 OF 7 — DWG REV: G

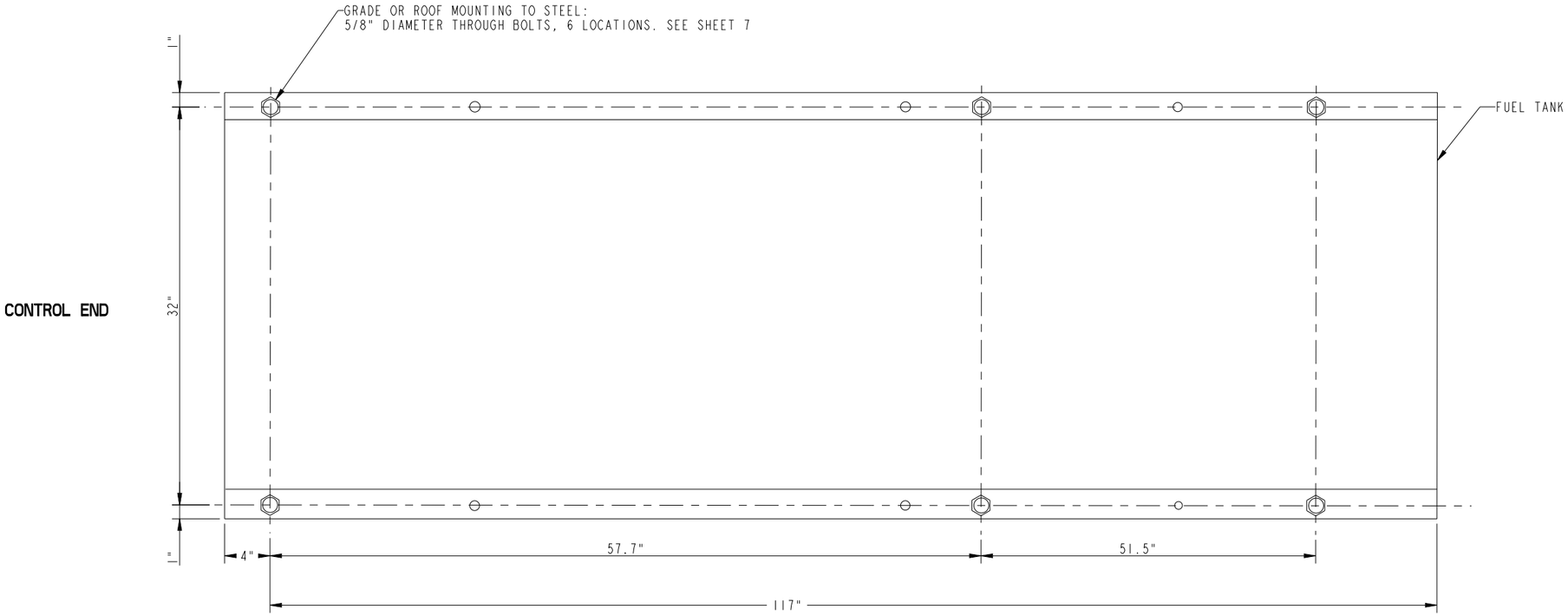
Regulatory Review and Approval is required prior to changing this item per
PGG 1-01-01-116. This item impacts compliance with these External Regulations:
IBC,OSHPD

Drawing Name: A044H912 Revision: G
Part Name: A044H911 Revision: G
ECO-166360 Sheet 5 of 8

PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DWN	CKD	APVD	DATE
ECO-166360	G	2	ZONE A4, DIM 117" WAS DIM 121"	MN	JP	J.BUTLER	25NOV16

MOUNTING HOLE LOCATIONS FOR FUEL TANK WITH 6 BOLTS TO MOUNTING STRUCTURE.



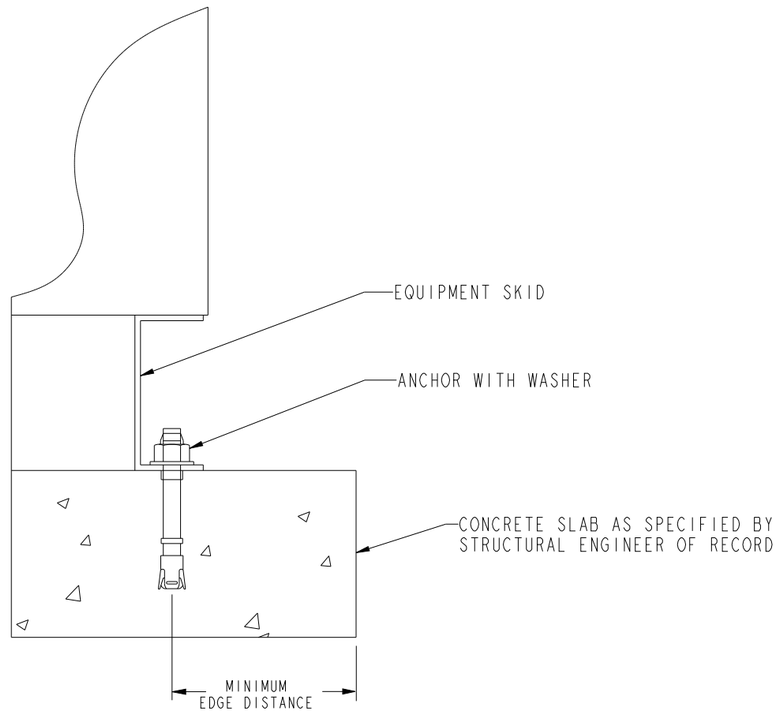
C25 D6, C30 D6, C40 D6, C50 D6, C60 D6 : FUEL TANKS WITH 6 HOLE ATTACHMENT

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS			SIM TO NONE	DWN T_ABEL		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 T_SORENSON		INSTALLATION,GENSET SEISMIC REQUIREMENTS	
ANG TOL: ± 1.0°	SCALE: 1/1		- CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP	APVD D_GILLETT	SITE CODE		
				DATE 18JAN13	PGF	DWG SIZE D	A044H911
			FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994	FIRST USED ON ALL		SHEET 6 OF 7	DWG REV G

Regulatory Review and Approval is required prior to changing this item per PGG 1-01-01-116. This item impacts compliance with these External Regulations: IBC,OSHPD

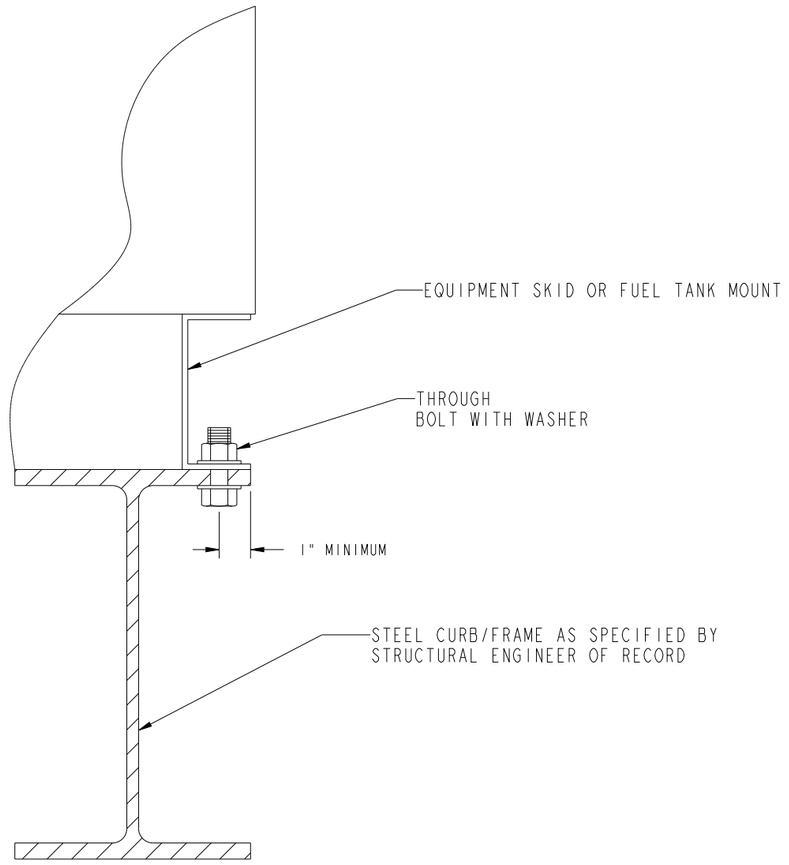
PTC® Creo® Parametric

REL NO	LTR	NO	REVISION	DWN	CKD	APVD	DATE
ECO-166360	G	--	--	MN	JP	J.BUTLER	25NOV16



REFER TO APPLICABLE TABLE FOR ANCHOR
SPECIFICATION AND LOCATION

CONCRETE CONNECTION



STEEL CONNECTION

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

DWN T_ABEL
CKD T_SORENSON
APVD D_GILLETT
DATE 18JAN13
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, REF. ASME Y14.5M-1994
FIRST USED ON ALL

SITE CODE PGF

CUMMINS POWER GENERATION

INSTALLATION, GENSET
SEISMIC REQUIREMENTS

DWG SIZE D | A044H911 | SHEET 7 OF 7 | DWG REV G

Regulatory Review and Approval is required prior to changing this item per
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IBC,OSHPD

Drawing Name: A044H912 Revision: G
Part Name: A044H911 Revision: G
ECO-166360 Sheet 7 of 8

Part A044H911 G

Description	Legacy Name	External Regulations	Application Status	Release Phase Code	Security Classification	Alternates
INSTALLATION,GENSET	A044H911	IBC,OSHPD	Production Only	Production	Confidential	

Part Specifications :A044H911 G

Name	Description	Legacy Name
A030B356	SPECIFICATION,MATERIAL	CES10903
A044H912	DRAWING,ENGINEERING	A044H912