

CATERPILLAR 3208

29A / SEBP1765

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7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 1 OF 9

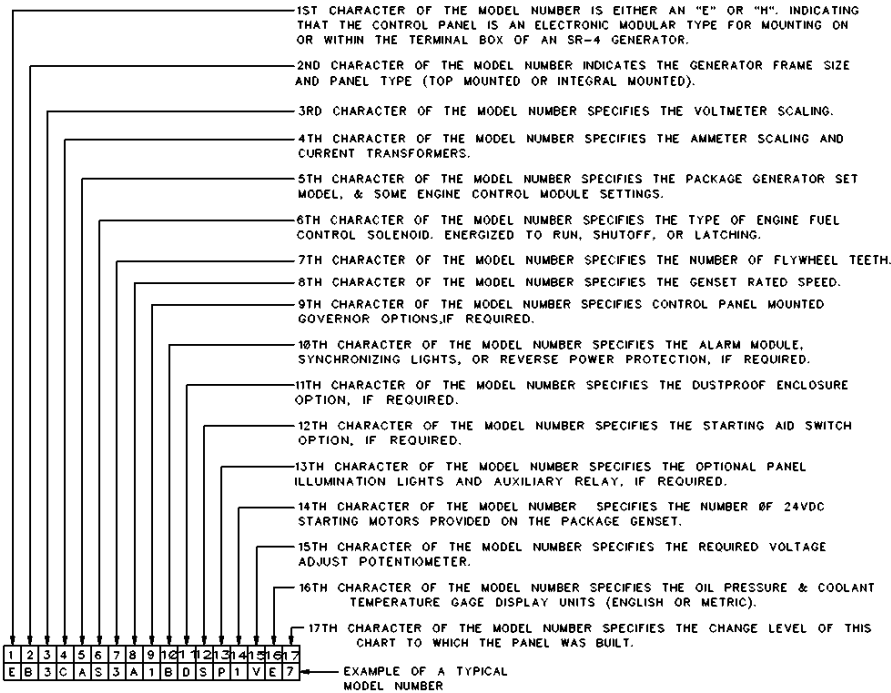
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I. SCOPE

THIS CHART IS REQUIRED TO ENABLE THE PROPER SELECTION AND ORDERING OF A GENERATOR MOUNTED ELECTRONIC MODULAR CONTROL PANEL, FOR USE WITH A CATERPILLAR AUTOMATIC STANDBY OR MANUAL PRIME POWER PACKAGE GENERATOR SET. THE CHART DEFINES THE CONTROL PANEL DESIGN AND BILL OF MATERIAL BY ESTABLISHING A MULTI-CHARACTER MODEL NUMBER.

II. MODEL NUMBER SELECTION

THE MODEL NUMBER OF THE CONTROL PANEL IS ESTABLISHED BASED ON PANEL OPTIONS AND GENERATOR RATINGS(EXAMPLE: EB3CASA1BDSP1VE7). THE MODEL IS DEVELOPED ON CHARACTER AT A TIME BY FOLLOWING THE INSTRUCTIONS ON SHEETS 1-5. A GENERAL DEFINITION OF MODEL NUMBER CHARACTERS APPEARS BELOW:



Ref.	Part number	Description	Qty	Code	Group page
Parts list rows are not synced on this VPS for SEBP1765/SEBP17650001 yet.					

7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 2 OF 9

Drawing 1 of 1

III. DESCRIPTION OF EQUIPMENT SPECIFIED BY MODEL NUMBER

1

— AN "E" AS THE FIRST CHARACTER OF THE MODEL NUMBER SPECIFIES THAT THE CONTROL PANEL IS AN ELECTRONIC MODULAR TYPE. AN "H" INDICATES THAT IT IS BUILT & TESTED TO MEET CANADIAN STANDARD ASSOC. (CSA) APPROVAL.
E=STANDARD PANEL
H=CSA APPROVED PANEL,INCLUDES 9Y-4336 FILM & 3L-0369 CSA DIELECTRIC TEST.

2

— THE SECOND CHARACTER OF THE MODEL NUMBER SPECIFIES THE GENERATOR FRAME SIZE, PANEL TYPE, & MOUNTING LOCATION. THE FRAME SIZE DETERMINES THE PHYSICAL DIMENSIONS OF THE CONTROL PANEL. SEE TABLE 1 AND FIGURE 1.

EB3CAS3A1BDSP1VE7

TABLE 1

	PANEL TYPE	GENERATOR FRAME SIZE	PANEL DIMENSIONS			VANDAL DOOR AS.
			A	B	C	
A	STANDARD GEN TOP MTD	360	603.2	323.8	323.8	REQUIRED
B	STANDARD GEN TOP MTD	440/580 680/800	698.5	323.8	323.8	REQUIRED
E	STANDARD MTD WITHIN GEN TERMINAL BOX	ALL	698.5	323.8	323.8	NOT REQ'D

FIGURE 1

3

— THE THIRD CHARACTER OF THE MODEL NUMBER SPECIFIES THE GENERATOR AC OPERATING VOLTAGE & THE RESULTING AC METERING MODULE VOLTMETER SCALING SELECTION.

MODEL EB3CAS3A1BDSP1VE7

	GENERATOR VOLTAGE(S) (LINE TO LINE)	VOLTMETER SCALING SELECTION	
		SET MODULE SWITCH S2 AT:	JUMPER MODULE TERMINAL
2	0 TO 350 VAC L-L	2	7 TO 5
3	351 TO 599 VAC L-L	0	6 TO 5
4	600 VAC L-L	0	6 TO 5

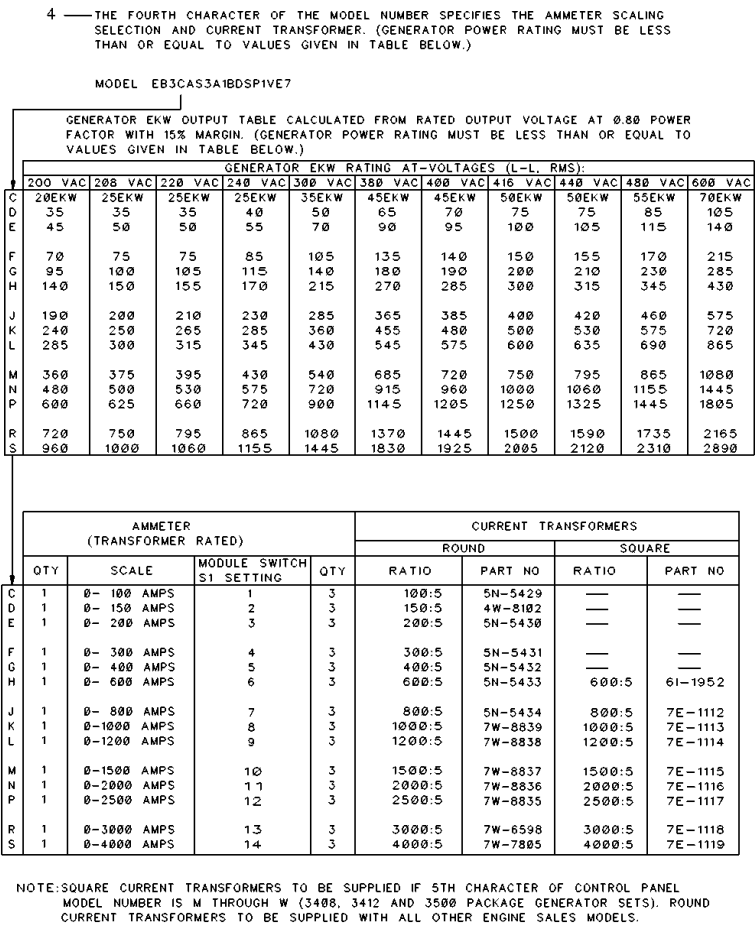
REF: REPUBLIC ELECTRIC AND DEVELOPMENT CO

Ref.	Part number	Description	Qty	Code	Group page
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7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 3 OF 9

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Ref.	Part number	Description	Qty	Code	Group page
Parts list rows are not synced on this VPS for SEBP1765/SEBP17650003 yet.					

7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 4 OF 9

Drawing 1 of 1

5 — THE FIFTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE PACKAGE GENERATOR SET ON WHICH THE PANEL WILL BE INSTALLED & SOME ENGINE CONTROL MODULE SETTINGS.

MODEL EB3CAS3A1BDSP1VE7

PACKAGE GENERATOR SET	CHARACTER	ENGINE CONTROL MODULE SETTINGS					
		OIL PRESSURE		COOLANT TEMP °C(°F)	OVER-SPEED	OIL STEP SPEED	CRANK TERMINATION SPEED
		HI RPM KPA(P.SI)	LOW RPM KPA(P.SI)				
3114 PRIME	A	206(30)	68(10)	107(225)	SAME AS 3208	SAME AS 3208	400 RPM
3116 PRIME	B						
3208 STANDBY	C	206(30)	68(10)	98(209)			
3208 PRIME	D						
3304 STANDBY	E						
3304 PRIME	F	82(12)	68(10)	98(209)			
3306 STANDBY	G						
3306 PRIME	H						
3406 STANDBY	J						
3406 PRIME	K						
3408 STANDBY	M						
3408 PRIME	N	206(30)	68(10)	107(225)	REF 3L-0332	REF 3L-0332	
3412 STANDBY	O						
3412 PRIME	P						
3508 STANDBY	R						
3508 PRIME	S						
3512 STANDBY	T	206(30)	68(10)	107(225)			
3512 PRIME	U						
3516 STANDBY	V						
3516 PRIME	W						

6 —THE SIXTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE TYPE OF THE ENGINE FUEL CONTROL SOLENOID.

MODEL EB3CAS3A1BDSP1VE7

	FUEL CONTROL SOLENOID TYPE	PROGRAM ENGINE CONTROL MODULE FOR:
R	ENERGIZED TO RUN	ENERGIZED TO RUN
S	ENERGIZED TO SHUTOFF	ENERGIZED TO SHUTOFF
L	LATCHING	ENERGIZED TO SHUTOFF

NOTE: IF CONTROL PANEL MODEL NUMBER 5TH CHARACTER IS "M" THROUGH "P", 7E-8396 AUXILIARY FUEL CONTROL RELAY GROUP IS INCLUDED.

Ref.	Part number	Description	Qty	Code	Group page
Parts list rows are not synced on this VPS for SEBP1765/SEBP17650004 yet.					

7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 5 OF 9 4W9313 & 4W9314-PAGE 20, 4P2788-PAGE 15 7E1233 & 7E1232-PAGE 19

Drawing 1 of 1

7 — THE SEVENTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE NUMBER OF TEETH ON THE FLYWHEEL OF THE GENSET THAT THE CONTROL PANEL WILL BE INSTALLED ON. IT IS IMPORTANT THAT THE CORRECT NUMBER OF TEETH BE PROGRAMED INTO THE ENGINE CONTROL MODULE TO ASSURE PROPER OPERATION.

MODEL EB3CAS3A1BDSP1VE7

	NUMBER OF FLYWHEEL TEETH	PACKAGE GANERATOR SET	GENERATOR FRAME SIZE
1	183	3516,3512,3508	ALL
2	136	3412,3408	ALL
3	136	3406(# 0 FLYWHEEL HOUSING)	582/450
4	113	3406(# 1 FLYWHEEL HOUSING)	ALL
5	156	3306,3304	ALL
6	134	3208 ,3114,3116	ALL

REFER TO CHART 3L-0332 TO ASSIST IN DETERMINING NUMBER OF FLYWHEEL TEETH.

8 — THE EIGHTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE RATED SPEED AT WHICH THE GENERATOR SET WILL OPERATE.

MODEL EB3CAS3A1BDSP1VE7

	RATED SPEED (RPM)
A	1000
B	1200
C	1500
D	1800

9 — THE NINTH CHARACTER OF THE MODEL NUMBER SPECIFIES CONTROL PANEL MOUNTED GOVERNOR OPTIONS, IF REQUIRED.

MODEL EB3CAS3A1BDSP1VE7

	GOVERNOR OPTION	GOVERNOR TYPE	GOV SW	SUPP. DIODE	GOVERNOR GP-ELECTRONIC	GOVERNOR FUSE PART #	QTY
X	NONE, OR SHIPPED LOOSE CUSTOMER INSTALLED 2301A GOVERNOR	CAT HYDRA-MECH. 2301A LOAD SHARING	—	—	—	NOT REQUIRED	—
1	GOVERNOR SWITCH GP	CAT HYDRA-MECH PSG,3161	7N-8008	9Y-8412	—	NOT REQUIRED	—
2	2301 GOVERNOR (W/PRE-REGULATOR)	2301 SPEED SENSING	—	—	4W-9314	7T-0037	1
3	2301 GOVERNOR	2301 SPEED SENSING	—	—	4W-9313	7T-0037	1
4	1724/8290 GOVERNOR (F/U/W 3114 AND 3116 ENGINES)	ELECTRONIC SPEED SENSING	—	—	7E-1233	3K-8782	1
5	1724/8290 GOVERNOR	ELECTRONIC SPEED SENSING	—	—	7E-1232	3K-8782	1
6	2301A GOVERNOR	2301A SPEED SENSING	—	—	4P-2788	7T-0037	1

NOTE : ABOVE CHARACTERS 2, 3, & 6 ARE NOT COMPATIBLE WITH THE CONTROL PANEL MODEL NUMBER 10TH CHARACTER D, E, F OR G (SYNC. LIGHT). ABOVE CHARACTERS 4 AND 5 ARE NOT COMPATIBLE WITH THE CONTROL PANEL MODEL NUMBER 10TH CHARACTER D, E, F, OR G (SYNC. LIGHT) UNLESS PROVIDED WITH OPTIONAL 7E-2583 LOAD SHARE MODULE (NOT INSTALLED).

Ref.	Part number	Description	Qty	Code	Group page
Parts list rows are not synced on this VPS for SEBP1765/SEBP17650005 yet.					

7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 6 OF 9 7C1002 & 7C4725-PAGE 12, 9Y2907 & 9Y2906-PAGE 13, 7E1234-PAGE 14

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10 THE TENTH CHARACTER OF THE MODEL NUMBER SPECIFIES EITHER THE ALARM MODULES, SYNCHRONIZING LIGHT MODULE, SYNCHRONIZING LIGHT MODULE WITH GENERATOR REVERSE POWER PROTECTION OPTION, IF REQUIRED.

MODEL EB3CAS3AIBDSPIVE7

MODULE TYPE	MODULE OR CONTROL GP	REVERSE POWER RELAY	FILMS	COVER PLATE
X NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	NOT REQ'D	7C-1009
A ALARM (NFPA99)	9Y-2907	NOT REQUIRED	NOT REQ'D	NOT REQUIRED
B ALARM (NFPA 110)	9Y-2906	NOT REQUIRED	NOT REQ'D	NOT REQUIRED
C ALARM (SINGLE UNIT PRIME POWER)	7E-1234	NOT REQUIRED	NOT REQ'D	NOT REQUIRED
D SYNC. LIGHTS (0-480V L-L)	7C-1002	NOT REQUIRED	NOT REQ'D	NOT REQUIRED
E SYNC. LIGHTS (600V L-L)	7C-4725	NOT REQUIRED	NOT REQ'D	NOT REQUIRED
F SYNC. LIGHTS (0-480V L-L) WITH REVERSE POWER	7C-1002	5N-5510	7C-4062	NOT REQUIRED
G SYNC. LIGHTS (600V L-L) WITH REVERSE POWER	7C-4725	7C-4378	7C-4062	NOT REQUIRED

NOTE : ABOVE CHARACTERS D, E, F, & G ARE INCOMPATIBLE WITH THE CONTROL PANEL MODEL NUMBER 9TH CHARACTERS 2, 3, AND 6 (2301 GOVERNORS). REVERSE POWER RELAY SHALL BE SET AT APPROX. 15% OF GENERATOR RATING.
ABOVE CHARACTERS D, E, F, AND G ARE INCOMPATIBLE WITH THE CONTROL PANEL MODEL NUMBER 9TH CHARACTERS 4 AND 5 UNLESS PROVIDED WITH OPTIONAL 7E-2583 LOAD SHARE MODULE (NOT INSTALLED).

11 THE ELEVENTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE DUSTPROOF ENCLOSURE OPTION, IF REQUIRED. SATISFIES NEMA 12 AND IP44.

MODEL EB3CAS3AIBDSPIVE7

DUSTPROOF AS.
X NOT REQUIRED
D 7C-3527

12 THE TWELFTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE STARTING AID SWITCH OPTION, IF REQUIRED.

MODEL EB3CAS3AIBDSPIVE7

QTY	STARTING AID SWITCH	METER PANEL FILM
X 0	NOT REQUIRED	7W-9800
S 1	9D-3721 MANUAL	7W-9800
A 1	8C-9812 AUTOMATIC	7E-5916

NOTE: ABOVE CHARACTER "A" PERMITS INJECTION OF ETHER INTO ENGINE AFTER CRANK TERMINATION IF JACKET WATER TEMPERATURE IS LESS THAN 70°F (52°C).

Ref.	Part number	Description	Qty	Code	Group page
Parts list rows are not synced on this VPS for SEBP1765/SEBP17650006 yet.					

7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 7 OF 9

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13 — THE THIRTEENTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE PANEL ILLUMINATION LIGHT GROUP AND AUXILIARY RELAY OPTIONS, IF REQUIRED.

MODEL EB3CAS3A1BDSP1VE7

	QTY	LAMP HOUSING AS.	LAMP	SWITCH	PLUG BUTTON	RELAY	SOCKET
X	0	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	—	—
	2	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	5P-4935	—	—
P	2	7G-9730	7N-5876	—	NOT REQUIRED	—	—
	1	—	—	8D-2676	NOT REQUIRED	3N-5714	4W-8787

14 — THE FOURTEENTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE NUMBER OF 24VDC STARTING MOTORS PROVIDED ON THE PACKAGE GENERATOR SET, TO BE CONTROLLED BY THE PANEL.

MODEL EB3CAS3A1BDSP1VE7

		QTY	STARTER MOTOR MAGNETIC SWITCH(S)	CIRCUIT BREAKER PART # (3114 & 3116 PRIME GENSETS (REF:MODEL # CHARACTER 5))	ALL OTHER GENSETS
1	SINGLE STARTING MOTOR	1	9X-8124	9H-1958	1N-9770
2	DUAL STARTING MOTORS	2	9X-8124	—	—
		1	—	—	9H-1958

15 — THE FIFTEENTH CHARACTER OF THE MODEL NUMBER SPECIFIES THE PROPER VOLTAGE ADJUSTING POTENTIOMETER.

MODEL EB3CAS3A1BDSP1VE7

CHARACTER CODE DEFINITION
A=3N-5981 500 OHM
B=4W-5731 1000 OHM
V=7C-4471 FOR USE WITH VR3 VOLT REG. (10K OHM)

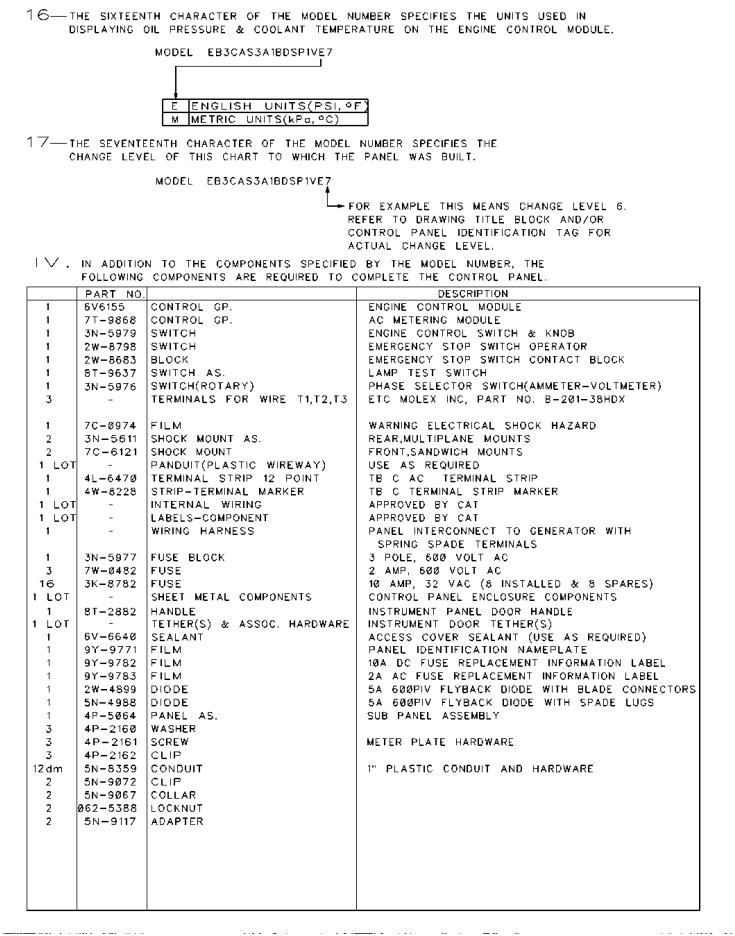
V	EXCITATION	GENERATOR FRAME SIZE
A OR V	SELF EXCITED	280 THRU 588
B OR V	PERMANENT MAGNET	589
A OR V	SELF EXCITED	681
B OR V	PERMANENT MAGNET	683
A OR V	SELF EXCITED	685
B OR V	PERMANENT MAGNET	687
A OR V	SELF EXCITED	689
B OR V	PERMANENT MAGNET	805
B OR V	ALL	806
B OR V	ALL	807
B OR V	ALL	808/809

Ref.	Part number	Description	Qty	Code	Group page
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7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 8 OF 9 6V6155-PAGE 17, 7T9868-PAGE 16

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Ref.	Part number	Description	Qty	Code	Group page
Parts list rows are not synced on this VPS for SEBP1765/SEBP17650008 yet.					

7C-1000 CHART-CONTROL PANEL

7C1000 ELECTRONIC MODULAR CONTROL PANEL-PART 9 OF 9

Drawing 1 of 1

GENERAL REQUIREMENTS

- 1. ALL CONTROL PANELS SHALL CONTAIN THE APPROPRIATE SPACE,WIRING,HOLES,ETC. TO SUPPORT THE FIELD INSTALLATION OF ANY OPTION LISTED ON THIS CHART.
- 2. THE COMPLETED CONTROL PANEL SHALL BE FINISHED PAINTED CATERPILLAR YELLOW,1E2139,WITH THE INSTRUMENT DOOR PAINTED FLAT BLACK.
- 3. A SUPPLIER NAMEPLATE WILL BE ATTACHED INSIDE THE PANEL. 7C-1000 AND THE CONTROL PANEL MODEL NUMBER SHALL BE STAMPED ON THIS NAMEPLATE, ALONG WITH THE DATE CODE.
- 4. A COMPLETE SET OF CAT DRAWINGS INCLUDING OUTLINE DRAWING, WIRING DIAGRAMS, SCHEMATIC DIAGRAMS,INTERCONNECT DIAGRAM SHALL BE PACKED WITH EACH CONTROL PANEL.
- 5. STANDARD HARDWARE FASTENERS USED FOR SHEETMETAL TO SHEETMETAL SECUREMENT SHALL BE TORQUED TO THE VALUES GIVEN BELOW. IN ADDITION TYPE B LOCTITE SEALANT, AS SPECIFIED BY 1E2200, SHALL BE USED EXCEPT ON INSTRUMENT PANEL DOOR FASTENERS.

SCREW SIZE (INCH)	STANDARD HARDWARE			
	NEWTON-METERS		FOOT-LBS	
	MIN	MAX	MIN	MAX
4-40	0.37	0.53	0.3	0.4
6-32	0.69	0.98	0.5	0.7
8-32	1.41	2.01	1.0	1.5
10-32	2.35	3.36	1.7	2.5
1/4-20	5.70	8.14	4.2	6.0
5/16-18	10.44	14.91	7.7	11.0
3/8-16	18.03	25.76	13.3	19.0
7/16-14	28.48	40.68	21.3	30.0
1/2-13	42.71	61.02	31.5	45.0
9/16-12	62.65	89.50	46.2	66.0
5/8-11	88.28	126.11	65.1	93.0
3/4-10	142.38	203.40	105.0	150.0
7/8-9	191.74	273.91	141.4	202.0

CATERPILLAR REFERENCE DRAWINGS
7C-1001 CHANGE 07 INSTRUCTIONS

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