



VFD Cabinet Access Must Be Limited to Qualified Personnel

Issue

The tops of the VFD cabinets do not have covers (tops) installed by design, and have a gap between the roof and the top of the cabinet, by design. This opening is required for proper cooling, ventilation, and cable routing. This area is not accessible without the use of a ladder and should not be used for additional cable routing without prior discussion with the OEM. Tossing items into this area can result in a rig power outage event or create other hazardous conditions.

Recommendation

Personnel who are not qualified and trained should not access this area without being escorted by a qualified person. Entry into an energized area (such as a plug panel or VFD cabinet overhead) should be limited to qualified personnel only — only after completing the necessary energized work permit, and Job Safety Analysis (JSA).

The building entry and inside doors leading to the electrical equipment space should be marked per NFPA 70E as a "Limited Approach Boundary" and each electrical cabinet should be marked as a "High Voltage Area." Any personnel in these areas must be qualified or escorted by qualified personnel.

Specific Recommendations are as follows:

1. Mark cabinets within the energized areas for **both the Driller's Cabin and the Power House** with "Danger High Voltage," signs every four feet.
2. Rig managers must manage and inform contract employees accessing their equipment of known hazards and information regarding the installation.
3. Train personnel on "Approach Boundaries" and energized work permit as per NFPA 70E.
4. Install boundary signs on the doors leading into the equipment space of **both the Driller's Cabin and Power House** as "Restricted Approach Boundaries" as per attached drawing.
5. Install signs on all cabinets, with high voltage warning.
6. Purchase temporary magnetic wire hangers for use on temporary third-party cable runs.
7. Ensure that an entry path free from exposure to energized areas is available for temporary third party cable entry for the Driller's Cabin.



Model: PACE-X	Aug. 7, 2015
Serial #: All	
Alert	

Requirements

Refer to the attached diagrams and have qualified personnel install appropriate signage where indicated.

1. Install temporary signs at the earliest opportunity. Order permanent signs.



SAFETY: Care must be taken while installing these signs to ensure that no part of the body will cross the electrically safe boundary. If any question exists on the installation of these signs, please contact RigLine 24/7.

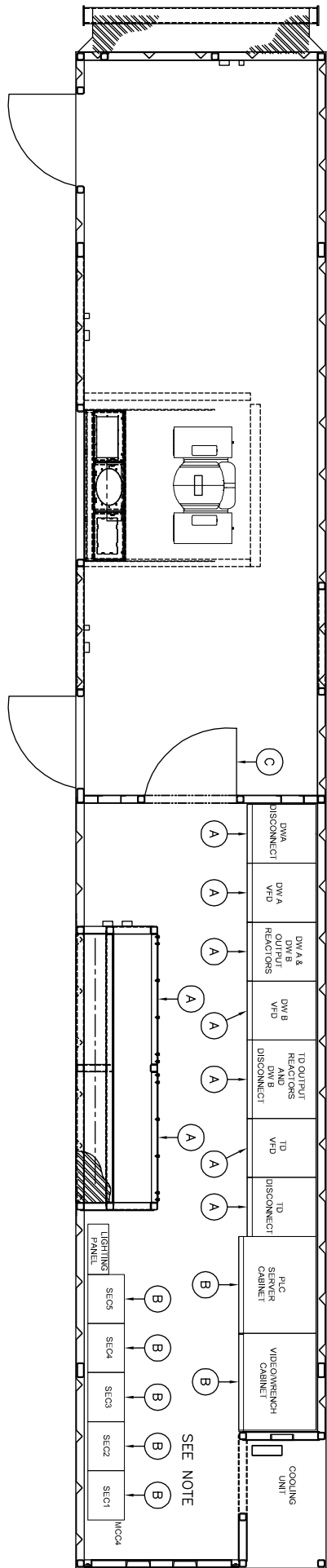
2. Install permanent signs per attached drawings as soon as permanent signs are received.
3. Report completion of these steps to RigLine 24/7.



SAFETY:

Wear recommended PPE and follow all applicable safety procedures prior to performing any work on these buildings. A Job Safety Analysis (JSA) must be completed daily and signed by all personnel who will be working in the area.

CANRIG PART NUMBER	DESCRIPTION	DC QTY	PH QTY	Total
DT22653	Sign, Danger 1000V	9	24	33
DT22652	Sign, Danger 600V	7	11	18
DT22651	Sign Hazardous Voltage 20X14	1	2	3
C10099	ADHESIVE, EPOXY KIT	1	2	3
AY22244	DC Installation Drawing	1	---	1
AY22245	PH Installation Drawing	---	1	1

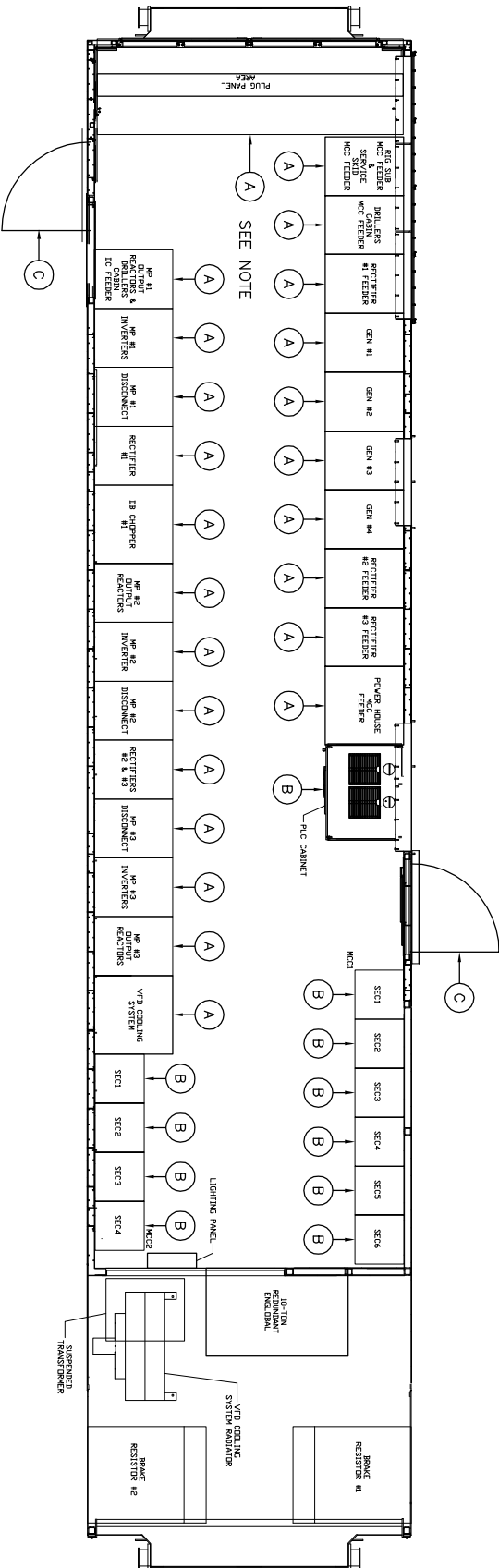


PLAN VIEW

- NOTE:
1. INSTALL ALL SIGNS AT TOP OF EACH SECTION
 2. INSTALL DANGER HIGH VOLTAGE SIGN (DT22653) ON THE TOP OF UPPER BARRIER ABOVE DRIVE LINE UP AT 4" INTERVALS
- A = DT22653
 B = DT22652
 C = DT22651

No.	V/M/D	BY	REVISION DESCRIPTION	CHKD.	APP'D.	THIS PRINT & SERIAL ARE THE PROPERTY AND INVENTION OF CANVIS INC. THIS PRINT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION AND WRITTEN CONSENT OF CANVIS INC. CANVIS INC. 10000 W. 10TH AVE. DENVER, CO 80202	TOLERANCE - UNLESS OTHERWISE SPECIFIED REMOVE SHARP CORNERS AND BURRS DIMENSIONS TO CENTERLINE UNLESS OTHERWISE NOTED DIMENSIONS TO SURFACE UNLESS OTHERWISE NOTED DIMENSIONS TO TRUE POSITION UNLESS OTHERWISE NOTED DIMENSIONS TO MACHINED SURFACES UNLESS OTHERWISE NOTED DIMENSIONS TO UNLESS SHOWN = 0.03 MAX.	FABRICATING MATERIAL (IN) FABRICATING METRIC (MM) 24" TO 60" ± 1/16" 60" TO 96" ± 1/8" 96" TO 120" ± 1/4" 120" TO 240" ± 1/2" 240" & OVER ± 3/4" MACHINING MATERIAL DECIMAL ± 0.005" ANGULAR ± 0.005" MACHINING ± 1' FABRICATION ± 2'	DRAWN TRU 15/08/08 CHECKED TRU 15/08/08 APPROVED ESB 15/08/08 MATERIAL	THIRD ANGLE PROJECTION SHEET SIDE D KIT, ASSY, WARNING SIGN, DRL CAB	SCALE NTS	EST WEIGHT	PROJECT	PROJECT	REV A
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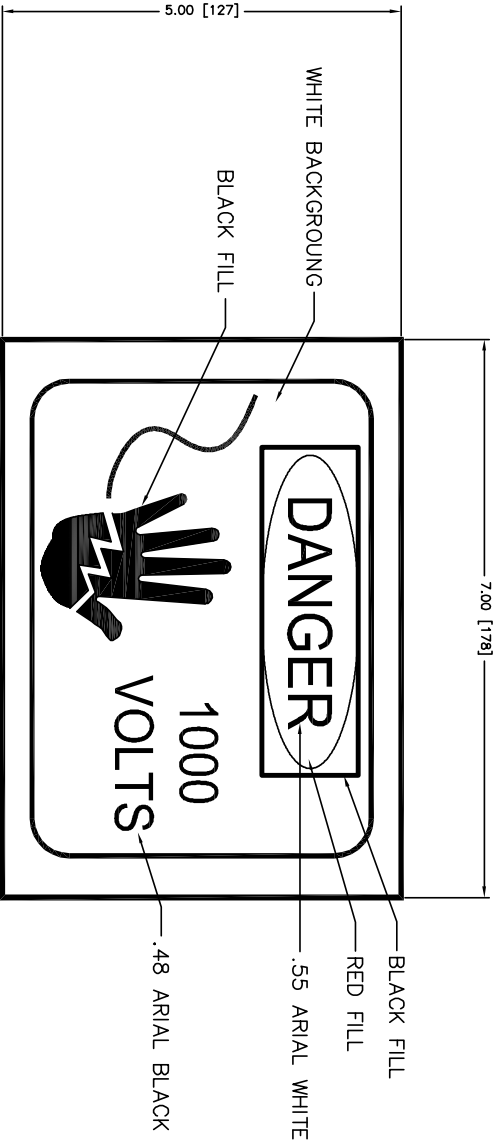
PLAN VIEW

- NOTE:
- INSTALL ALL SIGNS AT TOP OF EACH SECTION
 - INSTALL DANGER HIGH VOLTAGE SIGN (D1722653) ON THE TOP OF UPPER BARRIER ABOVE DRIVE LINE UP AT 4" INTERVALS
- A = D1722653
 B = D1722652
 C = D1722651

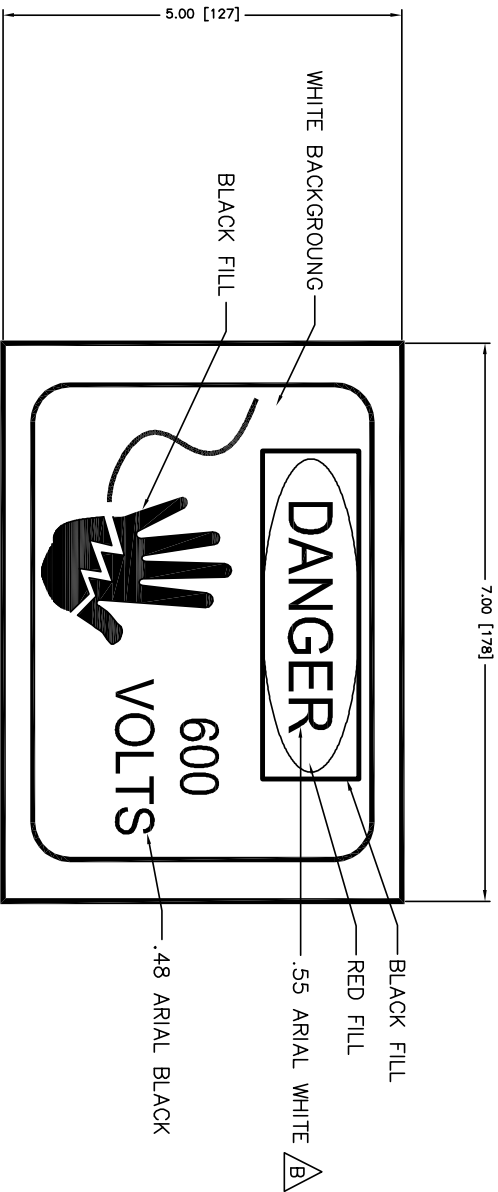
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REMOVE SHARP CORNERS AND BURRS		CASTING		FABRICATING IMPERIAL (in)		FABRICATING METRIC (mm)		DRAWN		TRU		15/08/07		THIRD ANGLE PROJECTION		SHEET SIZE		CANRIG		
	⊙	± 1/16		0 TO 24	± 1/16"	0 TO 610	± 1 mm	CHECKED						⊙	B	REVISED	REVISED	REVISED	REVISED	
	⊖	± .005 TIR		24 TO 60	± 1/8"	610 TO 1525	± 3 mm	APPRVD						⊖	B	REVISED	REVISED	REVISED	REVISED	
	—	± .005 IN 5 INCHES		60 TO 120	± 3/16"	1525 TO 3048	± 5 mm							—	B	REVISED	REVISED	REVISED	REVISED	
	∥	± .010 IN 5 INCHES		120 TO 150	± 1/4"	3048 TO 7112	± 7 mm							∥	B	REVISED	REVISED	REVISED	REVISED	
	∥	± .010 IN 5 INCHES		150 TO 250	± 1/2"	7112 & OVER	± 13 mm							∥	B	REVISED	REVISED	REVISED	REVISED	
	∥	± .010 OR AS SHOWN		250 & OVER	± 1/2"									∥	B	REVISED	REVISED	REVISED	REVISED	
	⊕	TRUE POSITION .005												⊕	B	REVISED	REVISED	REVISED	REVISED	
	⊕	MACHINED SURFACES 125°												⊕	B	REVISED	REVISED	REVISED	REVISED	
		MIN. RADIUS UNLESS SHOWN = 0.03 MAX.													B	REVISED	REVISED	REVISED	REVISED	
No.	Y/M/D	BY	REVISION DESCRIPTION	CHKD.	APVD.	MIN.	RADIUS UNLESS SHOWN = 0.03 MAX.	ANGULAR	MACHINING ± .005"	DECIMAL	FABRICATION ± .030"	MACHINING ± .015"	DECIMAL	FABRICATION ± .2"	EST. WEIGHT	N/A	SCALE	NTS	PROJECT	REV A
																			AY22245	REV A

KIT, ASSY, WARNING SIGN, PWR_HSE



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B	15/08/07	TRU			<p>CHANGED FONT FROM RED TO WHITE</p>								
					REVISION DESCRIPTION								



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B	15/08/07	TRU	FONT CHANGE FROM RED TO WHITE													

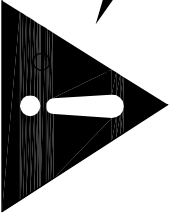


SIGN, DANGER, 600V, 7 X 5

14.00 [356]

BLACK FILL

20.00 [508]



WARNING



HAZARDOUS VOLTAGE INSIDE!

Entry into this

building constitutes entry into a **Limited Approach Boundary**. Only qualified personnel are permitted to enter. If an unqualified person needs to enter this area, a qualified person must advise him or her of the possible hazards and continuously escort the unqualified person for the duration of time that the unqualified person is inside this boundary.

ORANGE BACKGROUND

2.3 ARIAL BLACK

.8 ARIAL BLACK

WHITE BACKGROUND

.54 ARIAL BLACK

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