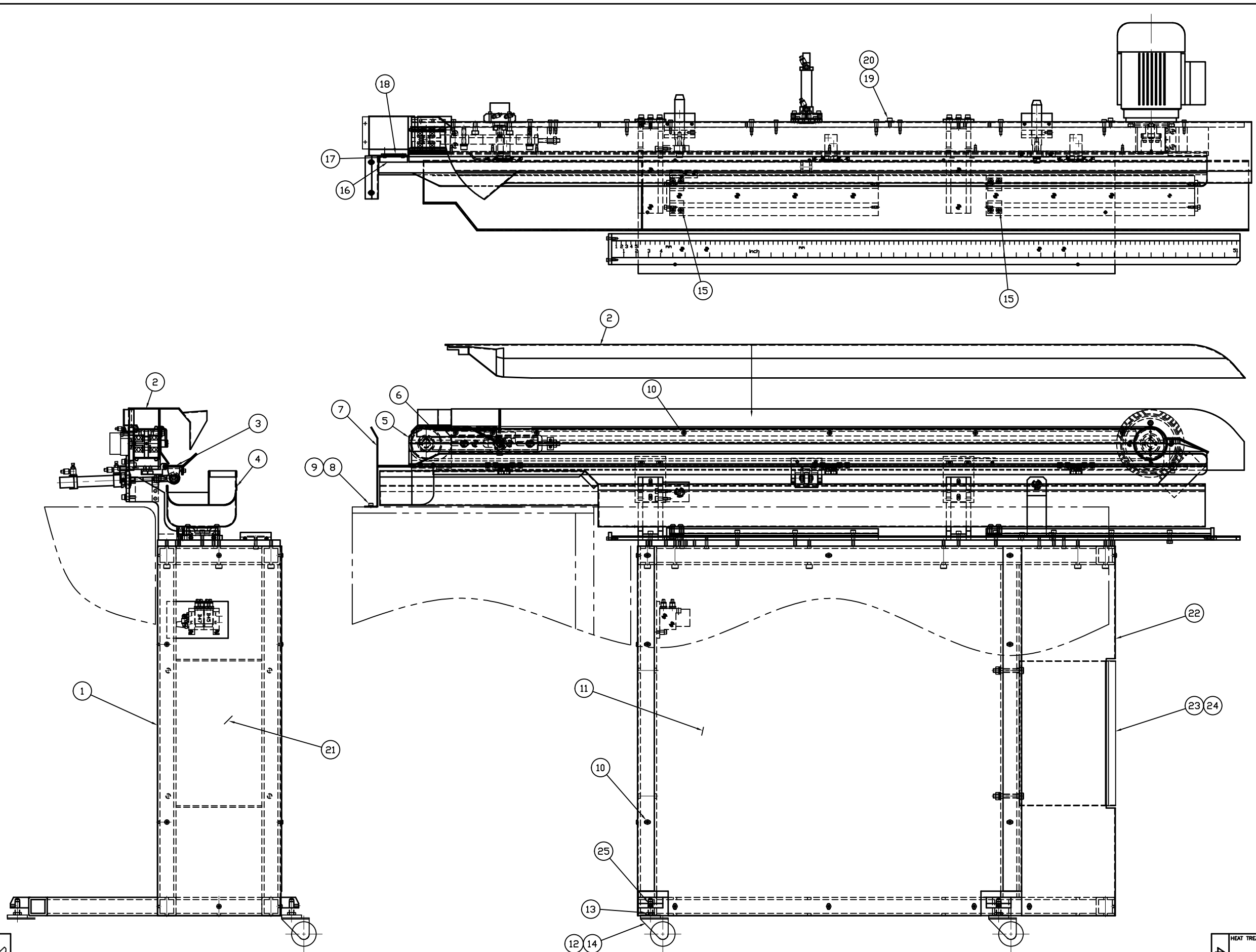


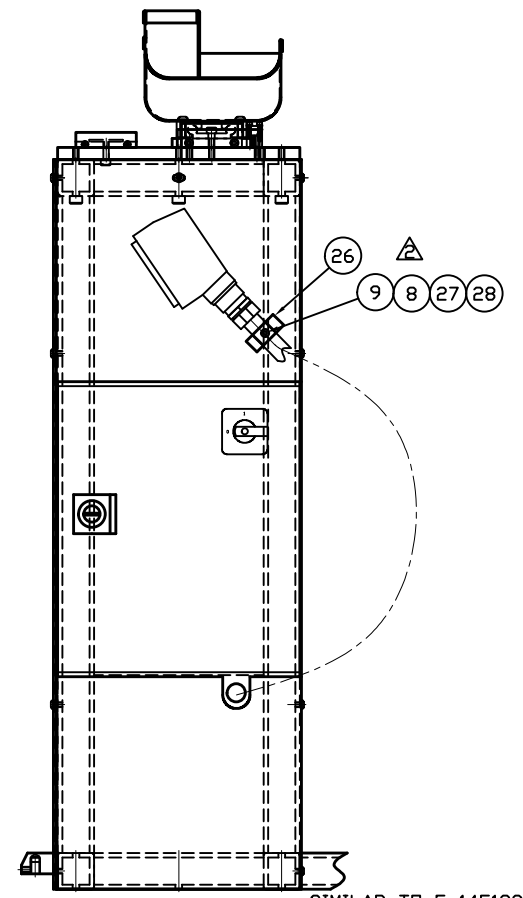
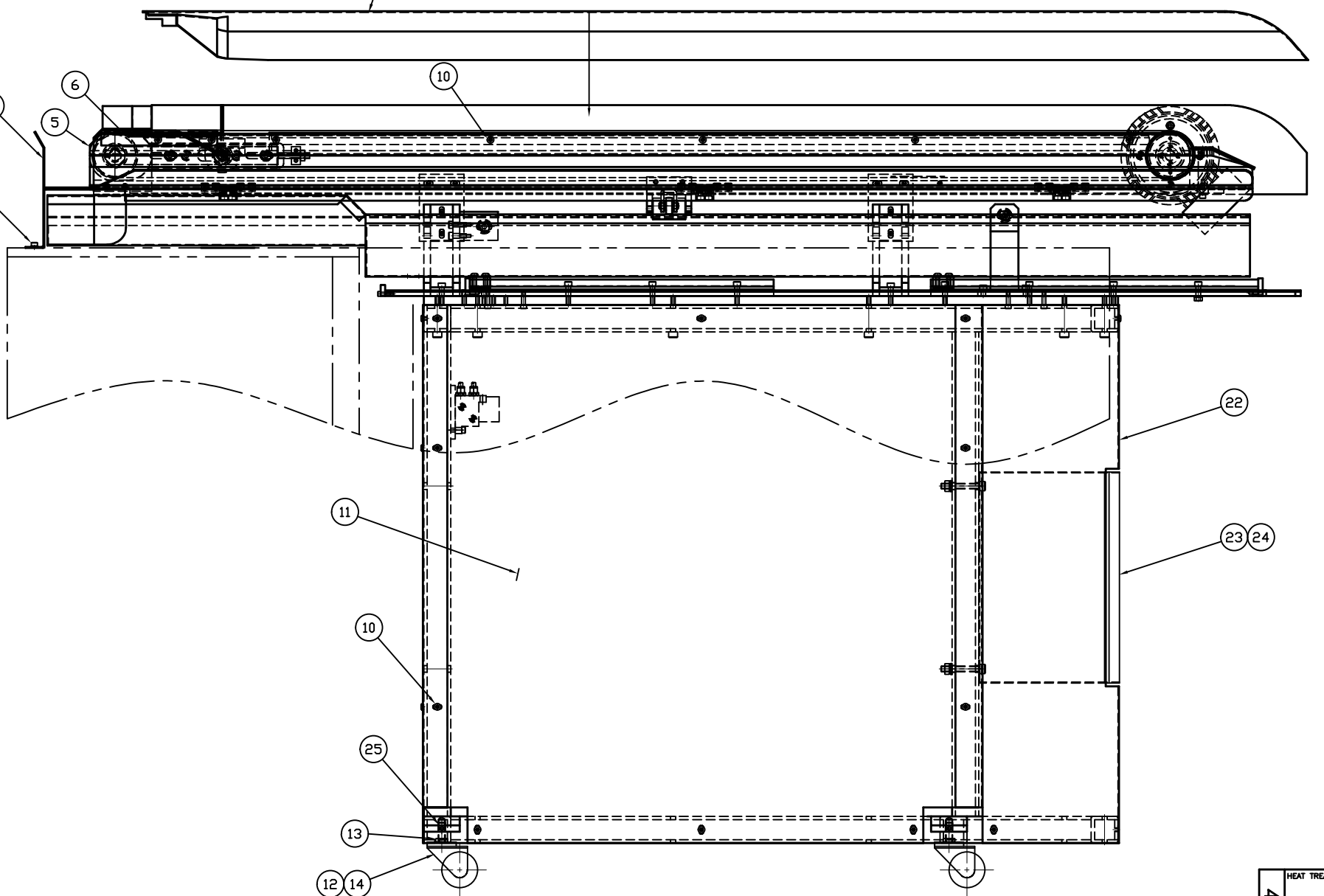
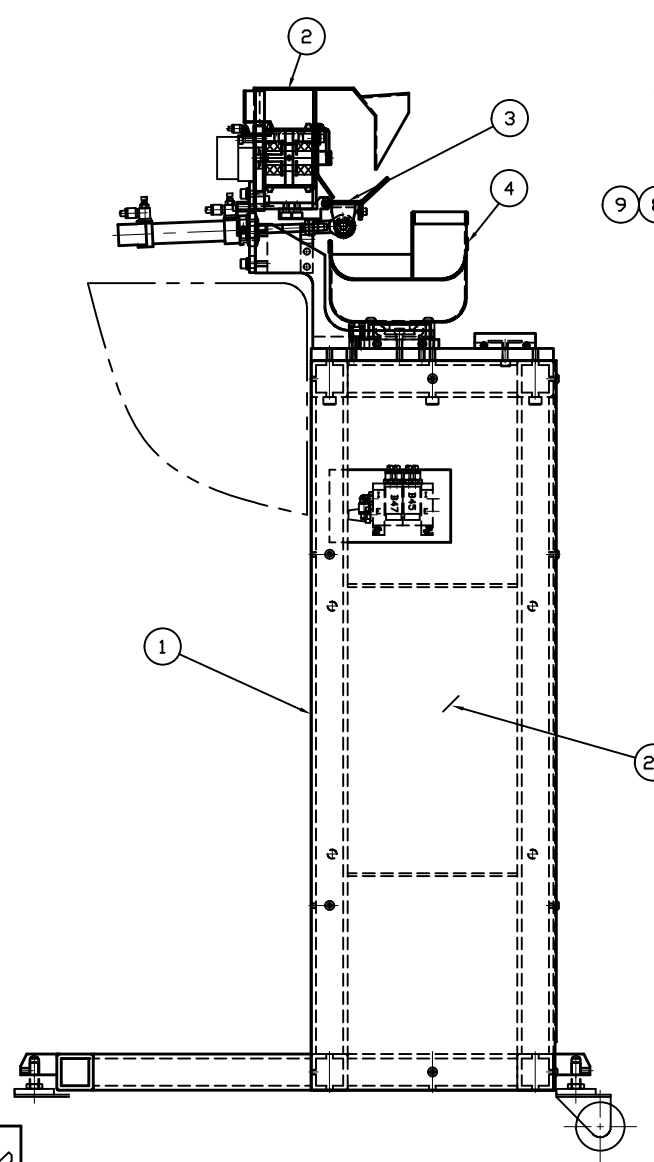
# CD-20 CR11 1.5m Linear Collector

REV 09/14/2015

- 1 4-145660 Main Assembly drawing
  - 4 • 5-145712 Electrical Assembly
  - 6 • 7-145711 Schematic
- 7 5-145723 CR11 Receptacle and Docking Parts for CD19 and CD20



QTY.	REF. NO.	PART NO.	DESCRIPTION
1	1001	145661	FRAME
1	1002	144562	GUARD, TOP
1	1003	144479	TRAY, DUMP
1	1004	145671	TRAY SLIDE
1	1005	145113	PLATE, FRONT
1	1006	144559	GUIDE, WIRE
1	1007	144839	DEFLECTOR, DROP
3	1008	950-094	WASHER FLAT M5
3	1009	950-521	SCREW SHC M5X10
28	1010	950-720	SCREW SHC BUTT M5X10
1	1011	145669	PANEL, FRONT
4	1012	950-388	SCREW SHC BUTT M10X35
4	1013	950-755	NUT JAM M10
4	1014	919-203	CASTER
8	1015	956-321	SCREW SHC BUTT M6X10
1	1016	144937	DEFLECTOR
2	1017	956-315	SCREW SHC BUTT M4X6
1	1018	144938	TIE BAR
3	1019	950-052	SCREW SHC M6X10
3	1020	950-057	WASHER FLAT M6
1	1021	146000	PANEL, SIDE LH
1	1022	146001	PANEL, SIDE RH
1	1023	7-145711	SCHEMATIC, ELECTRICAL
1	1024	5-145712	ELECT. ENCLOSURE ASSM.
4	1025	950-020	SCREW SH SET M6X8
1	1026	918-844	TOOL HOLDER
1	1027	952-325	WASHER LOCK M5
1	1028	950-027	NUT HEX M5

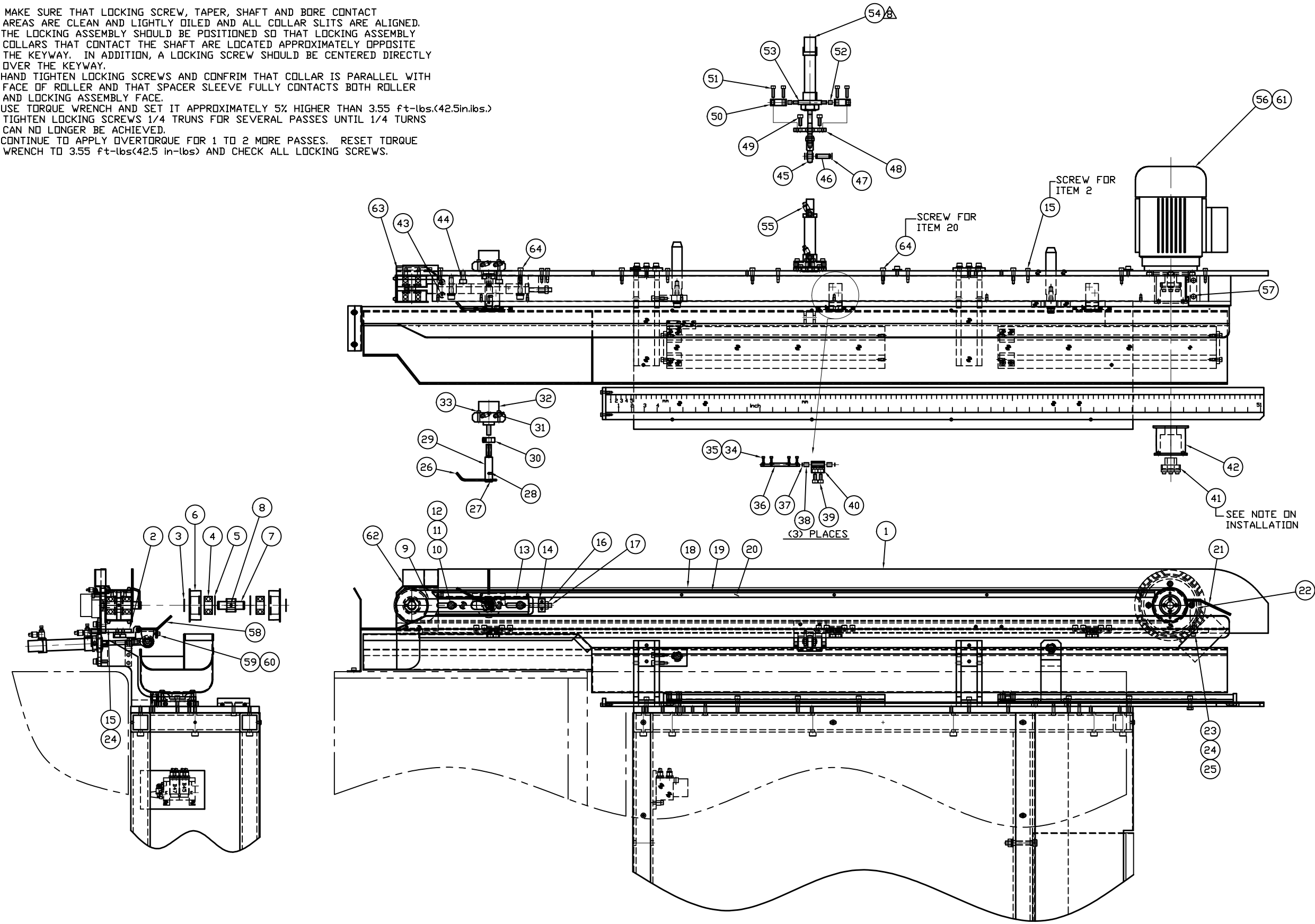


**REVISIONS**

ECO 12-98	5/15/2012	LALUMONDIER
ECO 12-181	9/18/2012	LALUMONDIER
ECO 12-191	10/5/2012	H. KEENE
ECO 14-001	1/3/2014	S. ROMUALD
ECO 14-36	1/31/2014	S. ROMUALD
ECO 15-184	6/2/2015	S. ROMUALD
ECO 15-204	6/18/2015	D. WESTRICK
ECO 15-227	7/9/2015	LALUMONDIER

4-145660	HEAT TREATMENT/SURFACE TREATMENT	-	MATERIAL DESCRIPTION	SEE B.O.M.	USED FOR	4-144842	CLASS CODE	RD106
	CONFIDENTIAL	D	MOVABLE 1.5M COLLECTOR ASSE.				REVISION DATE	7/9/2015
	WORK TO MEAN DIMENSIONS DO NOT SCALE DRAWING		MAIN ASSEMBLY CR11				REVISION	8
	ES-1 STANDARDS APPLY PLEASE READ THEM BEFORE MFG.	DESIGN BY	LALUMONDIER	SCALE	1:4	DRAWING NO.	4-145660	SHEET NUMBER
	CHECKED BY		DATE	6/2/2015				

- 1) MAKE SURE THAT LOCKING SCREW, TAPER, SHAFT AND BORE CONTACT AREAS ARE CLEAN AND LIGHTLY OILED AND ALL COLLAR SLITS ARE ALIGNED.
- 2) THE LOCKING ASSEMBLY SHOULD BE POSITIONED SO THAT LOCKING ASSEMBLY COLLARS THAT CONTACT THE SHAFT ARE LOCATED APPROXIMATELY OPPOSITE THE KEYWAY. IN ADDITION, A LOCKING SCREW SHOULD BE CENTERED DIRECTLY OVER THE KEYWAY.
- 3) HAND TIGHTEN LOCKING SCREWS AND CONFIRM THAT COLLAR IS PARALLEL WITH FACE OF ROLLER AND THAT SPACER SLEEVE FULLY CONTACTS BOTH ROLLER AND LOCKING ASSEMBLY FACE.
- 4) USE TORQUE WRENCH AND SET IT APPROXIMATELY 5% HIGHER THAN 3.55 ft-lbs.(42.5in.lbs.) TIGHTEN LOCKING SCREWS 1/4 TRUNS FOR SEVERAL PASSES UNTIL 1/4 TURNS CAN NO LONGER BE ACHIEVED.
- 5) CONTINUE TO APPLY OVERTORQUE FOR 1 TO 2 MORE PASSES. RESET TORQUE WRENCH TO 3.55 ft-lbs(42.5 in-lbs) AND CHECK ALL LOCKING SCREWS.



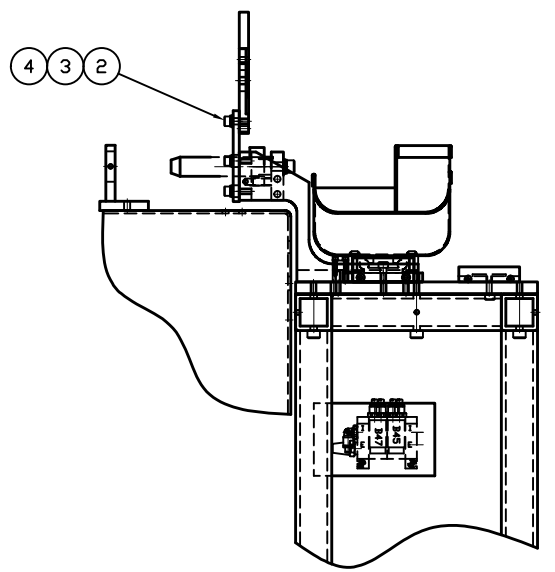
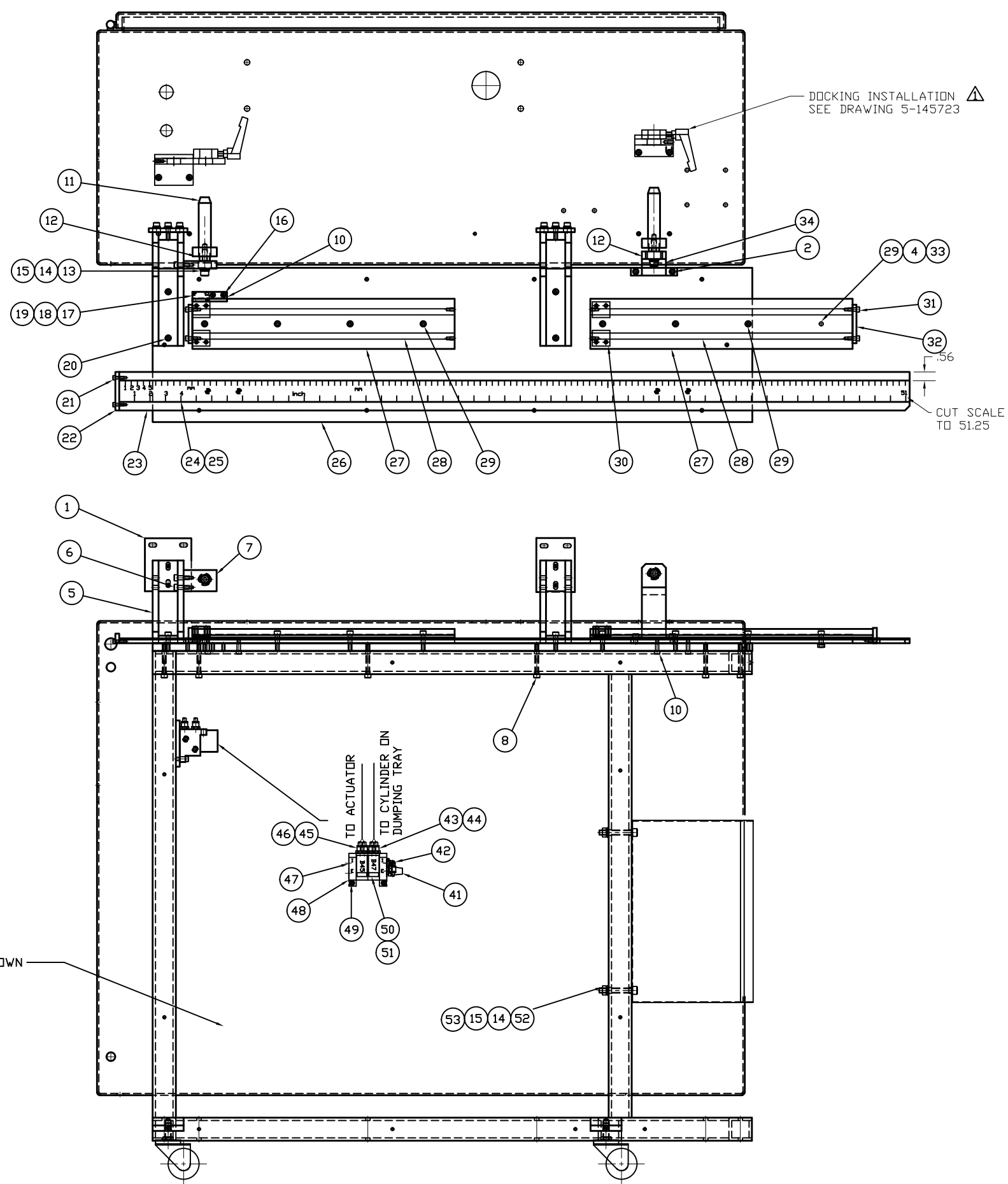
QTY.	REF. NO.	PART NO.	DESCRIPTION
1	2001	145122	PLATE, BACK
1	2002	144467	PLATE, LOWER FEED
2	2003	918-391	RETAINING RING
2	2004	918-572	BEARING BALL
2	2005	910-228	RETAINING RING
2	2006	145115	ROLLER, INFEED
1	2007	145226	SHAFT
1	2008	950-040	SCREW SH SET M5X6
1	2009	145227	BLOCK, TAKE-UP
2	2010	950-875	SCREW SHC M8X35
2	2011	950-025	WASHER FLAT M8
2	2012	952-379	WASHER LOCK M8
1	2013	144637	SPACER, TAKE-UP
1	2014	144470	BLOCK, LOCK
12	2015	950-023	SCREW SHC M5X16
1	2016	950-098	NUT JAM M8
1	2017	950-886	SCREW SH SET M8X40
1	2018	147110	BELT, CONVEYOR 1.5M
1	2019	147319	PLATE, UPPER SUPPORT
1	2020	145114	PLATE, UPPER SUPPORT
1	2021	144697	DEFLECTOR
1	2022	144757	SUPPORT, DEFLECTOR
2	2023	906-356	SCREW SHC M5X14
4	2024	950-094	WASHER FLAT M5
2	2025	952-325	WASHER LOCK M5
1	2026	144784	ROD, LIFTER
2	2027	952-502	SCREW SH SET M4X5
1	2028	145213	ROD, SEPARATOR
1	2029	145214	SHAFT, SEPARATOR
1	2030	918-418	COLLAR 10mm
2	2031	916-552	FITTING ELBOW 4TXM5
1	2032	144864	ACTUATOR-MODIFICATION
2	2033	950-395	SCREW SHC M4X25
12	2034	917-369	SCREW SHC M3X10
12	2035	956-471	WASHER LOCK M3
3	2036	139366	PIN
6	2037	950-057	WASHER FLAT M6
6	2038	916-971	BEARING SL
6	2039	950-038	SCREW SHC M6X12
3	2040	144474	BRACKET, PIVOT
1	2041	918-389	HUB, LOCK
1	2042	145116	ROLLER, DISCHARGE
4	2043	950-699	SCREW SH FLAT HD M5X10
2	2044	950-691	SCREW SHC M8X16
1	2045	916-458	ROD, END
1	2046	139374	PIN
2	2047	956-230	RETAINING RING E
1	2048	144557	BLOCK, CYLINDER MOUNTING
2	2049	916-354	SCREW SHC M6X14
2	2050	144558	BLOCK, CYLINDER PIVOT
4	2051	916-498	SCREW SHC M5X18
2	2052	917-334	BEARING SL
1	2053	918-387	TRUNNION MOUNT
1	2054	919-239	CYLINDER
2	2055	915-711	FLOW CONTROL VALVE
1	2056	916-931	MOTOR
2	2057	906-121	SCREW SH FLAT HD M4X8
1	2058	144851	TRAY SMALL WIRE
2	2059	950-850	SCREW SHC M4X6
2	2060	950-028	WASHER FLAT M4
1	2061	919-160	CORD GRIP, M20 5-9mm CA
1	2062	145118	GUARD, ROLLER
1	2063	145119	BAR, TIE
7	2064	950-849	SCREW SHC M6X16

- REVISIONS
- 5/15/2012 WESTRICK
- LALUMONDIER
- ECO 12-181
- 9/18/2012 LALUMONDIER
- ECO 12-191
- 10/5/2012 H KEENE
- ECO 14-001
- 1/3/2014 S. ROMUALD
- ECO 14-36
- 1/31/2014 S. ROMUALD
- ECO 15-184
- 6/2/2015 S. ROMUALD
- ECO 15-204
- 6/18/2015 D.WESTRICK
- ECO 15-227
- 7/9/2015 LALUMONDIER

SIMILAR TO 5-145123

4-145660	HEAT TREATMENT/SURFACE TREATMENT	MATERIAL DESCRIPTION	USED FOR	CLASS CODE
	CONFIDENTIAL	SEE B.O.M.	4-144842	RD106
	WORK TO MEAN DIMENSIONS DO NOT SCALE DRAWING	MOVABLE 1.5M COLLECTOR ASSE. MAIN ASSEMBLY CR11	SCALE: 1:4	REVISION DATE: 7/9/2015
	ES-1 STANDARDS APPLY PLEASE READ THEM BEFORE MFG.	DATE: 6/1/2011	DRAWING NO: 4-145660	REVISION: 8

SHEET NUMBER 2 of 3



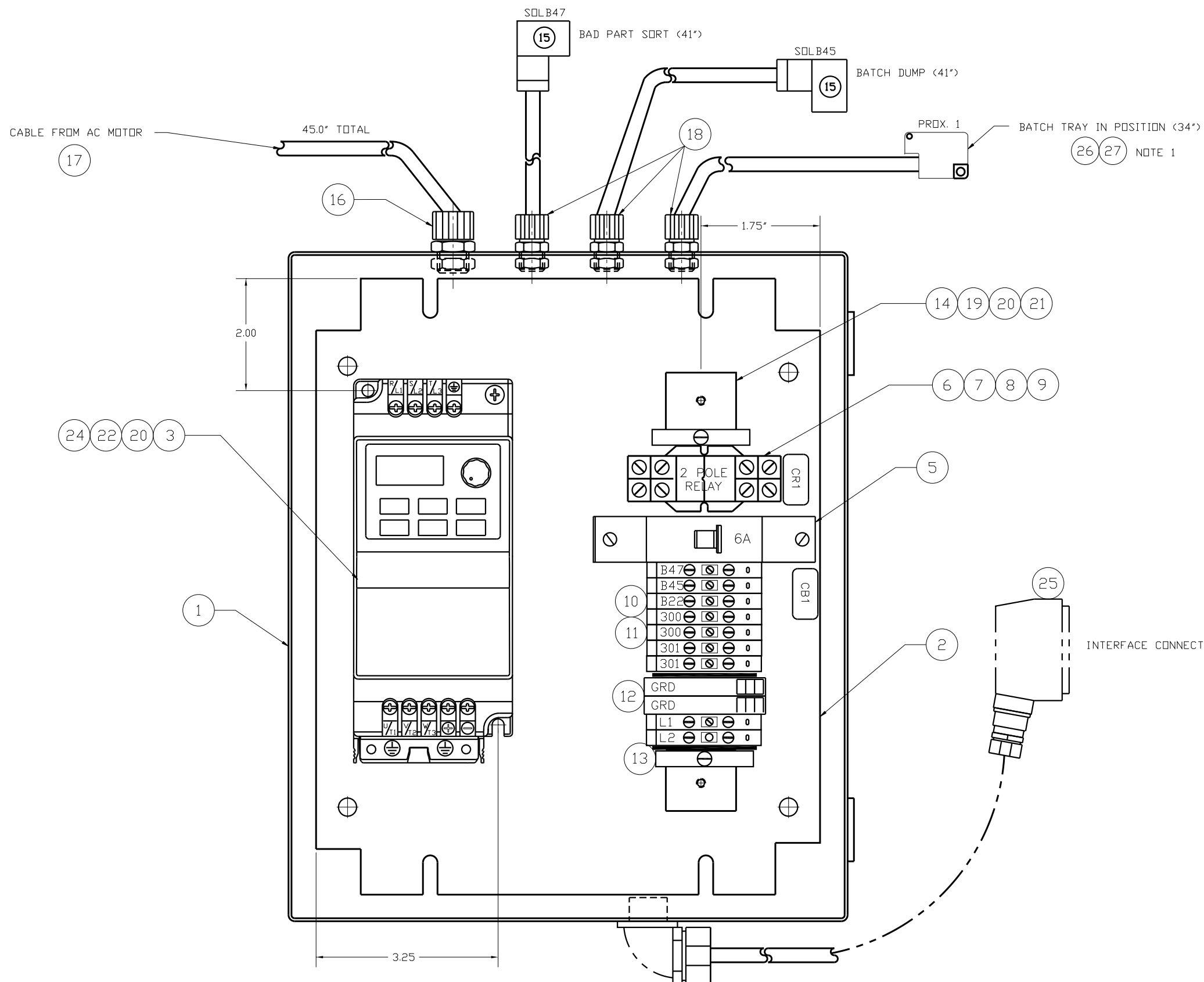
NO GUARDS SHOWN

QTY.	REF. NO.	PART NO.	DESCRIPTION
2	3001	146208	PLATE, MOUNTING
8	3002	950-066	SCREW SHC M6X18
6	3003	950-057	WASHER FLAT M6
6	3004	952-428	WASHER LOCK M6
2	3005	145664	BRACKET, COLLECTOR MOUNT
2	3006	950-849	SCREW SHC M6X16
1	3007	145666	BLOCK, DOCKING SHAFT
10	3008	950-732	SCREW SHC M6X50
12	3010	916-498	SCREW SHC M5X18
2	3011	145388	SHAFT, DOCKING
2	3012	916-770	COLLAR
2	3013	950-874	SCREW SHC M8X30
6	3014	950-025	WASHER FLAT M8
6	3015	952-379	WASHER LOCK M8
1	3016	145003	BRACKET, SENSOR
1	3017	917-203	SENSOR
2	3018	918-400	SCREW SHC M3X14
2	3019	950-334	WASHER FLAT M3
4	3020	950-113	SCREW SHC M6X20
4	3021	950-301	SCREW SHC M4X12
1	3022	144833	STOP, SCALE
1	3023	144832	SUPPORT, SCALE
1	3024	918-501	SCALE MM/INCH
4.2'	3025	603-637	TAPE, DOUBLE SIDE
1	3026	145659	PLATE, TOP
2	3027	145662	SUPPORT, SLIDE
2	3028	918-666	RAIL
8	3029	950-114	SCREW SHC M6X25
4	3030	918-010	CARRIAGE
4	3031	950-521	SCREW SHC M5X10
2	3032	144483	PLATE, STOP
1	3033	950-022	NUT HEX M6
1	3034	145667	BLOCK, DOCKING SHAFT
3035			
3036			
3037			
3038			
3039			
3040			
1	3041	903-528	MUFFLER 1/4
1	3042	915-234	FITTING ELBOW 6TX1/4
2	3043	915-246	FITTING STR. 6TX1/8
(36 in.) 3ft	3044	603-522	TUBING 6mm
2	3045	915-263	FITTING STR. 4TX1/8
(36 in.) 3ft	3046	915-141	TUBING 4mm
2	3047	900-452	PLUG, PIPE 1/4
1	3048	917-231	ENDPLATE KIT
2	3049	950-023	SCREW SHC M5X16
2	3050	917-286	VALVE AIR 5.4W MAC
2	3051	917-270	CORDSET
4	3052	952-380	SCREW SHC M8X60
4	3053	950-016	NUT HEX M8

REVISIONS

ECO 12-98	
5/15/2012	LALUMONDIER
ECO 12-181	
9/18/2012	LALUMONDIER
ECO 12-191	
10/5/2012	H KEENE
ECO 14-001	
1/3/2014	S. ROMUALD
ECO 14-36	
1/31/2014	S. ROMUALD
ECO 15-184	
6/2/2015	S. ROMUALD
ECO 15-204	
6/18/2015	D.WESTRICK
ECO 15-227	
7/9/2015	LALUMONDIER

4-145660	HEAT TREATMENT/SURFACE TREATMENT	MATERIAL DESCRIPTION	USED FOR	CLASS CODE	
	-	SEE B.O.M.	4-145217		RD106
	CONFIDENTIAL	D	MOVABLE 1.5M COLLECTOR ASSE.		REVISION DATE
	DO NOT SCALE DRAWING		MAIN ASSEMBLY CR11		7/9/2015
WORK TO MEAN DIMENSIONS DO NOT SCALE DRAWING		SCALE	1:4	REVISION	
ES-1 STANDARDS APPLY PLEASE READ THEM BEFORE MFG.		CHECKED BY	DATE	SHEET NUMBER	
		LALUMONDIER	06/01/2011	8	
			4-145660	3 of 3	



QTY.	REF.	PART NO.	DESCRIPTION
1	1001	145714	ENCLOSURE 12X10X8
1	1002	918-681	PANEL, MOUNTING 11X9
1	1003	5-145292	DELTA DRIVE
1	1004		
1	1005	918-380	CRT. BREAKER, 6A, 1PL
1	1006	906-610	RELAY, 2P2T 24VDC COIL
1	1007	907-016	RELAY SOCKET
2	1008	917-000	RELAY HOLD-DOWN CLIP
1	1009	910-886	DIODE, IN4004
9	1010	911-181	TERMINAL BLOCK
2	1011	911-182	TERMINAL END PIECE
2	1012	911-183	GROUND BLOCK
2	1013	911-184	TERMINAL END CLAMP
1	1014	905-833	RAIL MOUNTING 6.75"
2	1015	917-270	CORDSET VALVE, 24V LED
1	1016	916-534	CORD GRIP, .275-.34 CORD
3.75	1017	603-646	CABLE, 4C 16AWG
3	1018	916-530	CORD GRIP
2	1019	950-846	WASHER 5.3X16X1.6MM PL
4	1020	952-616	WASHER, LOCK M4
2	1021	950-756	SCREW, HEX BUT CAP M4X8
2	1022	950-301	SCREW, HEX SDC. CAP M4X12
2	1023		
2	1024	950-028	WASHER, FLAT M4
1	1025	5-145713	PLUG, 16PTS FOR COLLECTOR
REF	1026	917-203	SENSOR, NPN
1	1027	917-205	SENSOR EXTENSION CABLE

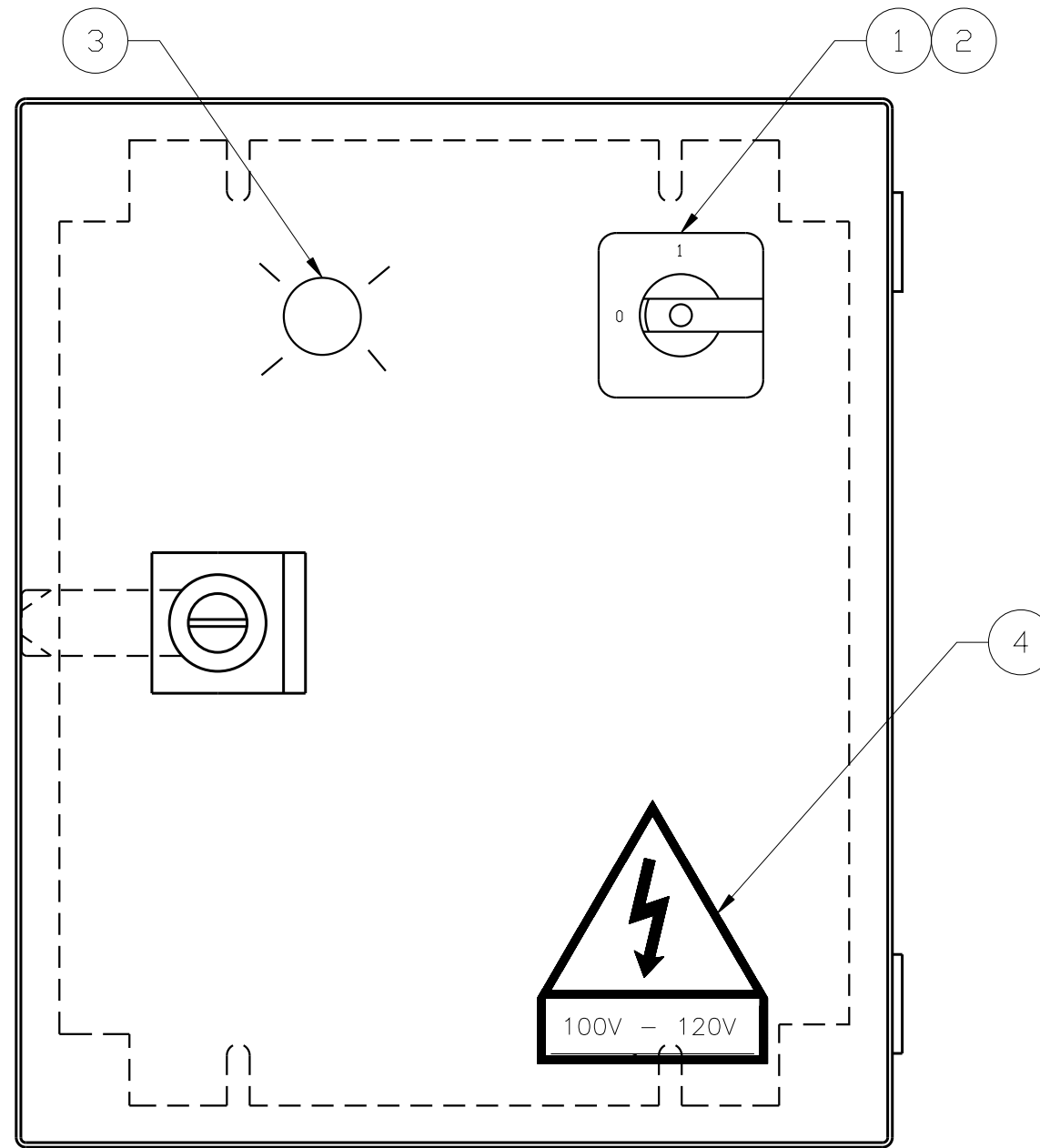
NOTES:  
 1. TOTAL LENGTH OF SENSOR EXTENSION CABLE.  
 2. LENGTHS OF VALVE HEADS AND PROX EXTENSION CABLE ARE OUTSIDE OF THE CORD GRIP.

SCHEMATIC NUMBER 7-145711

REVISIONS  
 Δ ECD 13-59  
 03/14/2013  
 E. SHAPTE

5-145712	HEAT TREATMENT/SURFACE TREATMENT	MATERIAL DESCRIPTION	USED FOR	4-145660
	CONFIDENTIAL <small>This document contains CONFIDENTIAL proprietary information which shall not be used, reproduced, or disclosed to others without prior written approval of Artes Engineering Company.</small>	D	<b>ARTOS</b> ENGINEERING COMPANY	CLASS CODE CD-20
	WORK TO MEAN DIMENSIONS DO NOT SCALE DRAWING	ELECTRICAL ENCLOSURE ASSY. CR.11 ROLLUP COLLECTOR CD-20		REVISION DATE 03/14/13
	ES-1 STANDARDS APPLY PLEASE READ THEM BEFORE MFG.	DRAWN BY E. SHAPTE CHECKED BY M. KIRST	SCALE 1:1 DATE 07/08/2011	DRAWING NO. <b>5-145712</b>

QTY.	REF. NO.	PART NO.	DESCRIPTION
1	2001	915-081	SWITCH, DISCONNECT 4POS
1	2002	915-082	HANDLE, DISCONNECT
1	2003	918-268	LAMP, LED 110V GREEN
1	2004	134851-1	VOLTAGE WARNING LABEL



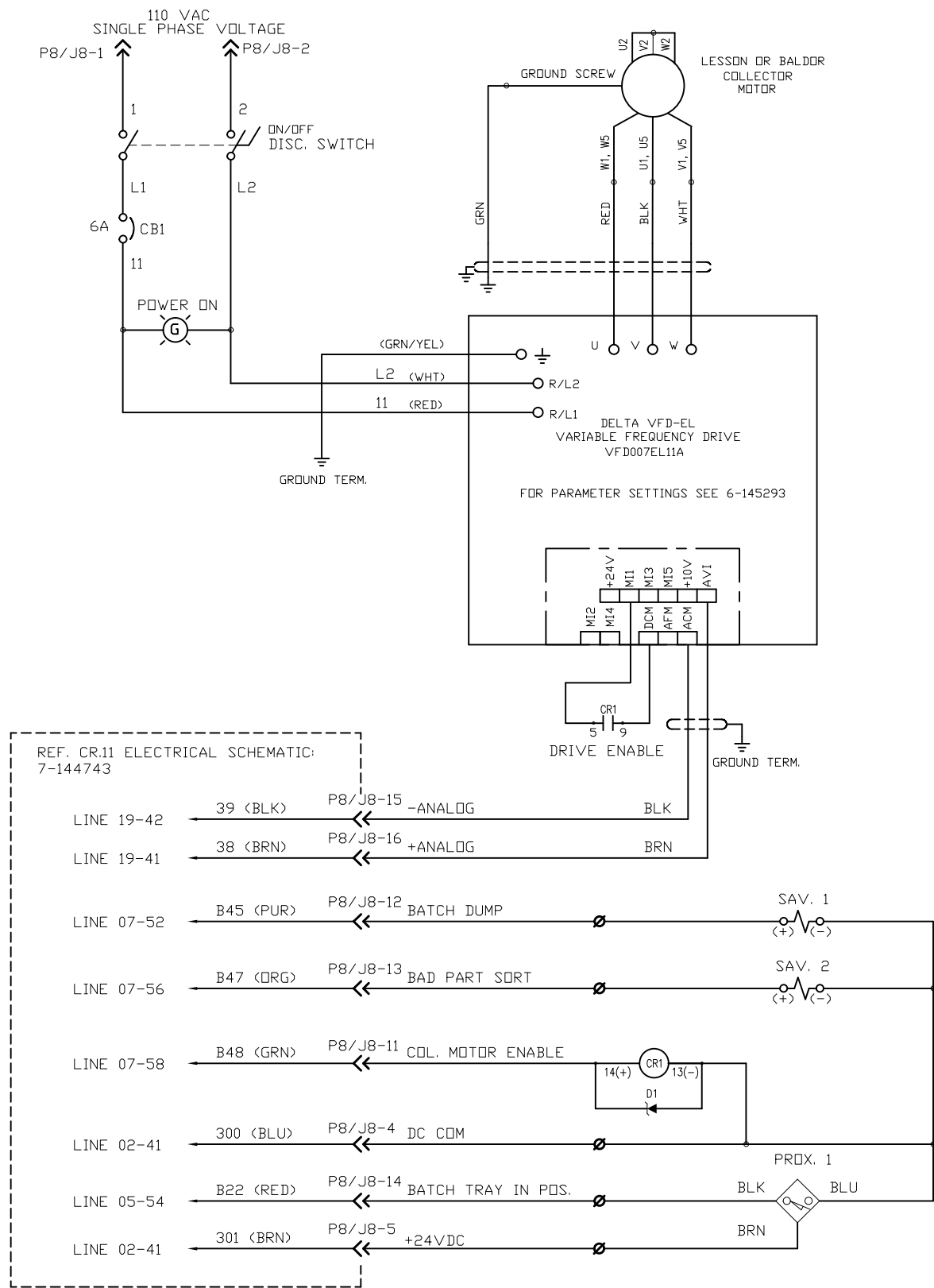
REVISIONS

Δ ECD 13-59  
 03/14/2013  
 E. SHAPTE

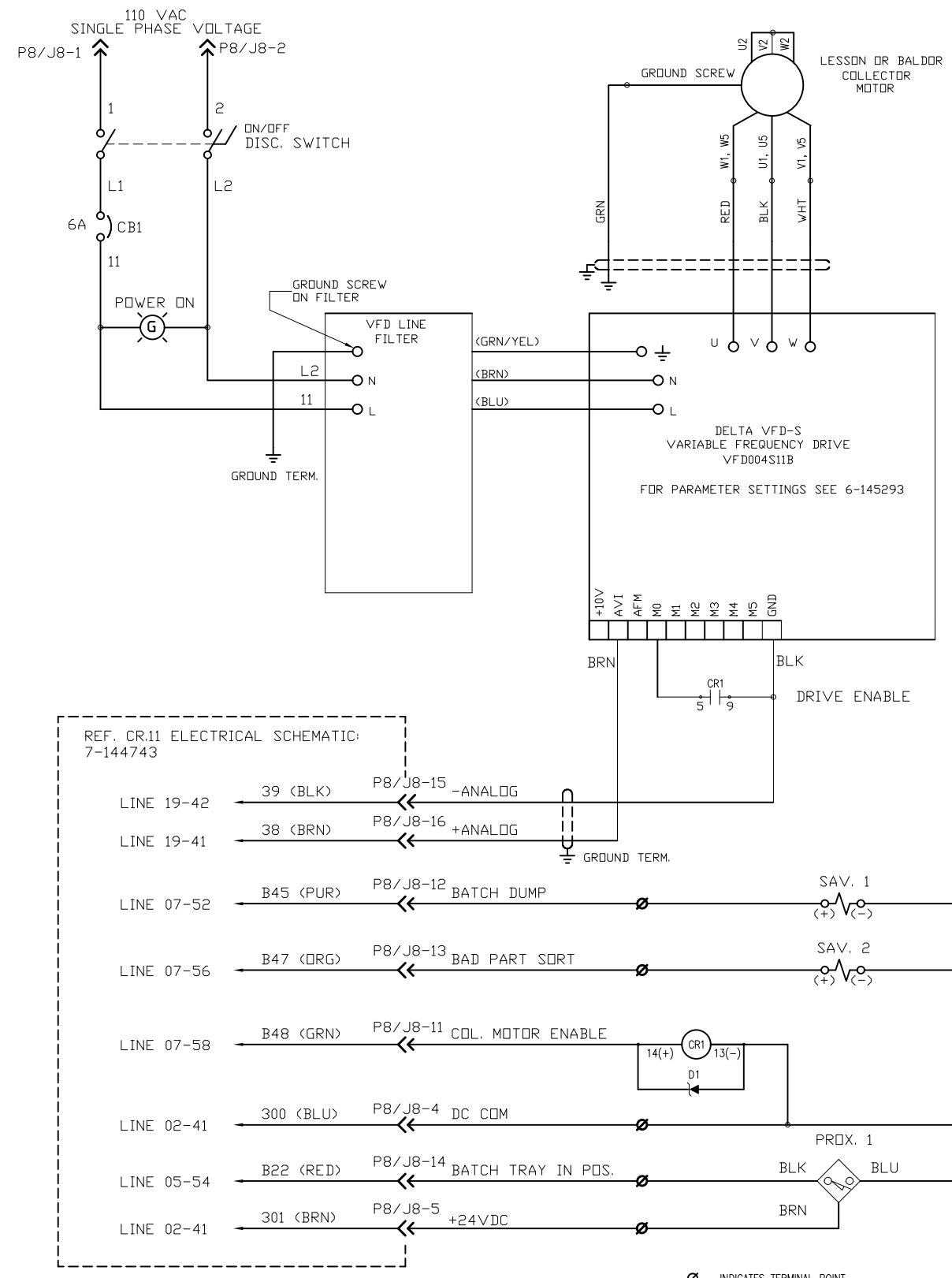
FRONT COVER

5-145712	HEAT TREATMENT/SURFACE TREATMENT	MATERIAL DESCRIPTION	USED FOR	CLASS CODE <b>CD-20</b> REVISION DATE <b>03/14/13</b> REVISION <b>1</b> SHEET NUMBER <b>2 of 2</b>
	CONFIDENTIAL <small>This document contains          CONFIDENTIAL          proprietary information          which shall not be used,          reproduced, or disclosed          to others without prior          written approval of Artes          Engineering Company.</small>	SEE B.O.M.	4-145660	
	<b>D</b>	 <b>ARTOS</b> ENGINEERING COMPANY		
	<b>ELECTRICAL ENCLOSURE ASS'Y</b> CR.11 ROLLUP COLLECTOR CD-20			
WORK TO MEAN DIMENSIONS DO NOT SCALE DRAWING		DRAWN BY E. SHAPTE CHECKED BY M. KIRST	SCALE 1:1 DATE 07/07/2011	DRAWING NO. <b>5-145712</b>
ES-1 STANDARDS APPLY PLEASE READ THEM BEFORE MFG.				

ELECTRICAL SCHEMATIC FOR VFD-EL:

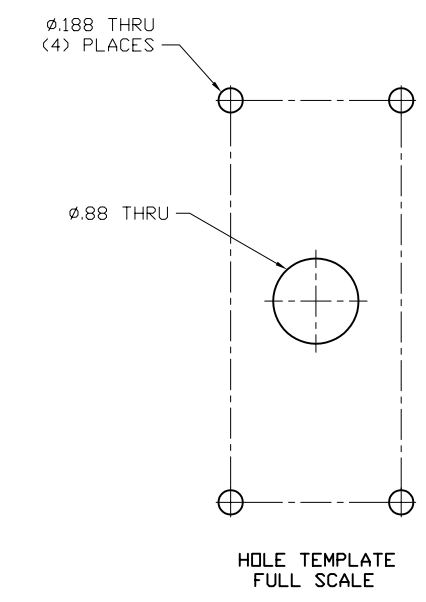
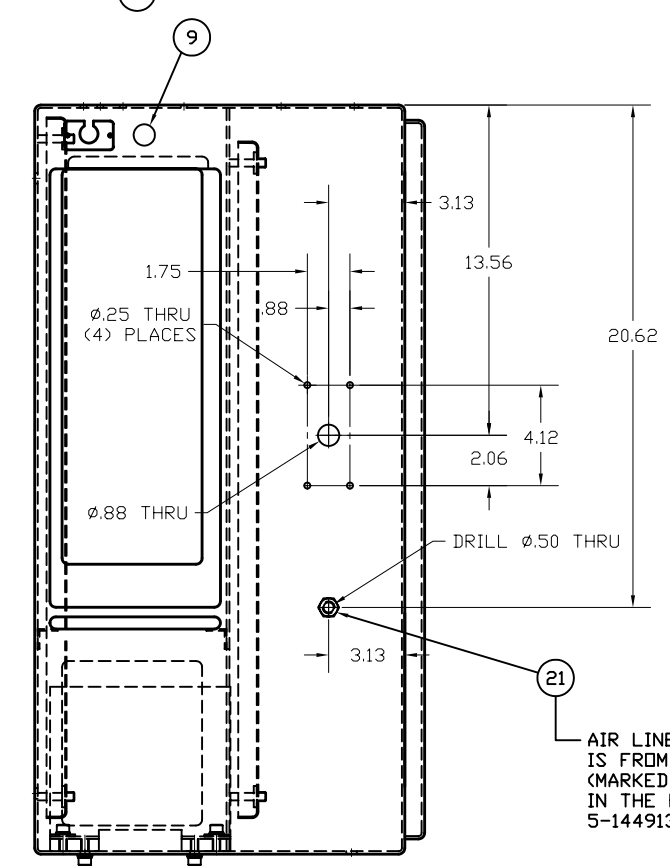
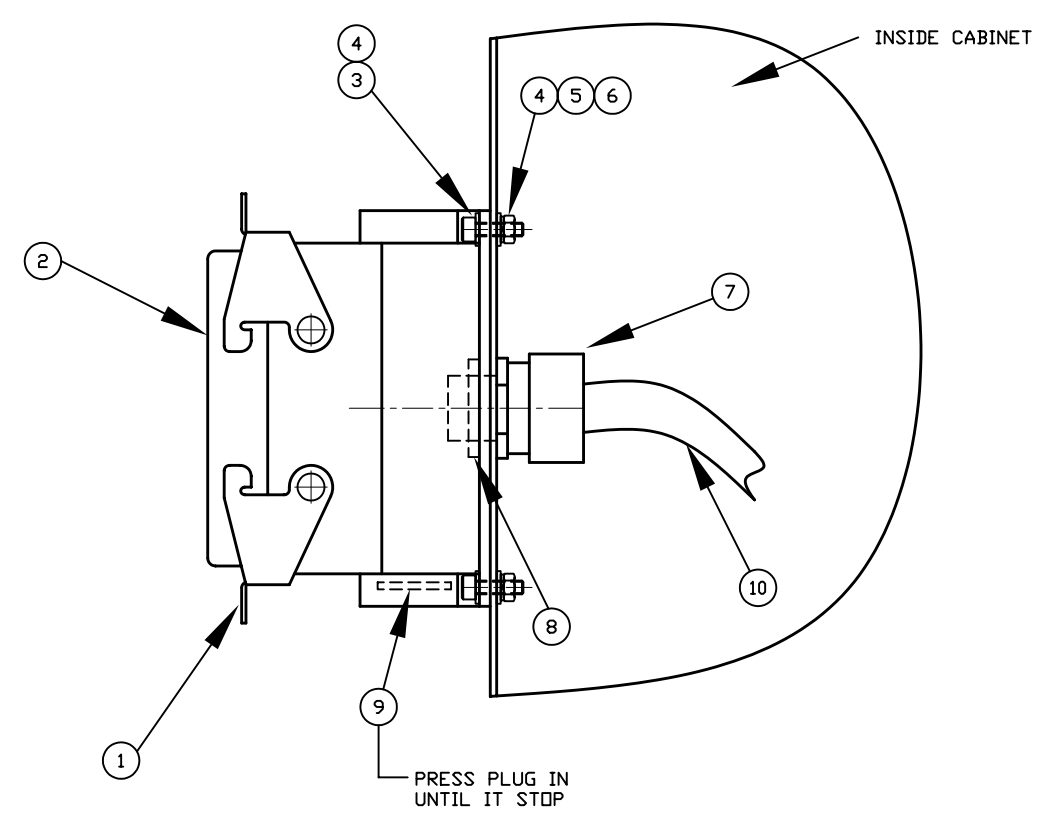
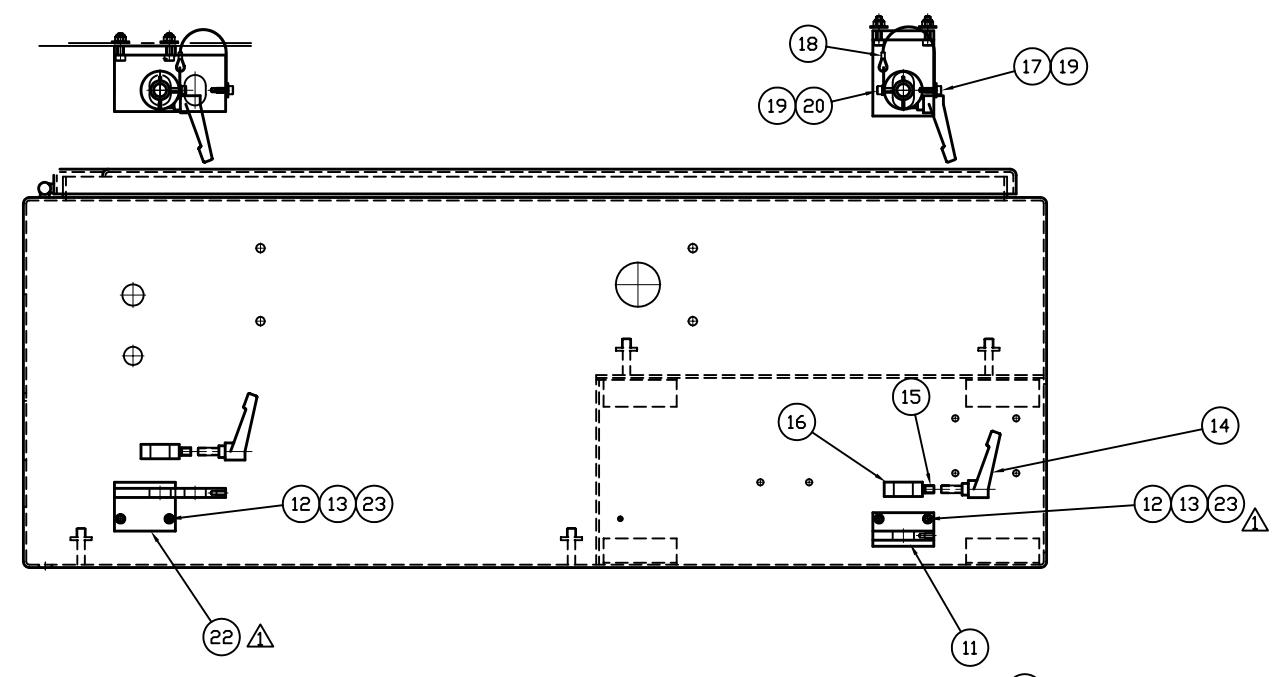


ELECTRICAL SCHEMATIC FOR VFD-S:



7-145711	HEAT TREATMENT/SURFACE TREATMENT	MATERIAL DESCRIPTION	USED FOR	5-145712	<p>CLASS CODE CD-20 REVISION DATE 05/03/13 REVISION 0 SHEET NUMBER 1 of 1</p>
	CONFIDENTIAL	D			
	WORK TO MEAN DIMENSIONS DO NOT SCALE DRAWING		SCHEMATIC, ELECTRICAL CR.11 ROLLUP LINEAR COLLECTOR CD-20		
	ES-1 STANDARDS APPLY PLEASE READ THEM BEFORE MFG.	DRAWN BY E. SHAPTE CHECKED BY M. KIRST	SCALE 1:1 DATE 07/08/2011	DRAWING NO. 7-145711	

QTY	REV	PART NO.	DESCRIPTION
1	1	145722	RECEPTACLE, BASE
1	2	916-992	COVER, DUST
4	3	950-394	SCREW SHC M4X16
8	4	950-028	WASHER FLAT M4
4	5	952-616	WASHER LOCK M4
4	6	950-004	NUT HEX M4
1	7	910-374	CORD GRIP
1	8	910-379	LOCKNUT
2	9	912-345	PLUG, HOLE
1	10	5-145716	CR.11 CD-19 AND 20 RECEPT.
1	11	145616	BLOCK, DOCKING
4	12	950-114	SCREW SHC M6X25
4	13	950-057	WASHER FLAT M6
2	14	916-168	HANDLE
2	15	145389	SPACER, DOCKING
2	16	145484	COLLAR, DOCKING
2	17	950-846	WASHER FLAT
2	18	918-618	LANYARD
2	19	950-375	SCREW SHC M4X12
2	20	952-325	WASHER LOCK M5
1	21	912-523	COUPLER, BULKHEAD
1	22	146209	BLOCK, DOCKING
4	23	917-941	NUT, NYLON LOCK M6



AIR LINE FOR COUPLER IS FROM THE MANIFOLD (MARKED #1) TOP PORT IN THE PNEUMATIC ENCLOSURE 5-144913

NOTE  
1. IF THE CONNECTOR NEEDS TO BE REMOVED, COVER PLATE 143961 CAN BE USED TO COVER THE HOLE.

NOTE: ASSEMBLY IS USED FOR CR.11 COILING BOWLS AND COLLECTOR ENCLOSURE ASSY'S.

REVISIONS

ECO 12-105	5/15/2012	LALUMNDIER
ECO 12-180	9/19/2012	LALUMNDIER

5-145723	HEAT TREATMENT/SURFACE TREATMENT	MATERIAL DESCRIPTION	USED FOR	CLASS CODE CR11 REVISION DATE 9/19/2012 REVISION 2 SHEET NUMBER 1 of 1
	CONFIDENTIAL	SEE BOM	5-145706,5-145712	
	D	INSTALLATION ELECT. AND DOCK CR.11 ROLLUP COILING BOWLS AND COLLECTOR		
	WORK TO MEAN DIMENSIONS DO NOT SCALE DRAWING	DRAWN BY: F. SHAPTE CHECKED BY: M. KIRST DATE: 07/14/2011	SCALE: 1:4 PART NO.: 5-145723	