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Technical Publications

Direction 2219417–100 Revision 12

Revolution[®] XQ/i[®] System Renewal Parts and Disassembly/Reassembly

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REV 12

DIRECTION 2219417-100

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WARNING

- THIS SERVICE MANUAL IS AVAILABLE IN ENGLISH ONLY.
- IF A CUSTOMER'S SERVICE PROVIDER REQUIRES A LANGUAGE OTHER THAN ENGLISH, IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE TRANSLATION SERVICES.
- DO NOT ATTEMPT TO SERVICE THE EQUIPMENT UNLESS THIS SERVICE MANUAL HAS BEEN CONSULTED AND IS UNDERSTOOD.
- FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO THE SERVICE PROVIDER, OPERATOR OR PATIENT FROM ELECTRIC SHOCK, MECHANICAL OR OTHER HAZARDS.

AVERTISSEMENT

- CE MANUEL DE MAINTENANCE N'EST DISPONIBLE QU'EN ANGLAIS.
- SI LE TECHNICIEN DU CLIENT A BESOIN DE CE MANUEL DANS UNE AUTRE LANGUE QUE L'ANGLAIS, C'EST AU CLIENT QU'IL INCOMBE DE LE FAIRE TRADUIRE.
- NE PAS TENTER D'INTERVENTION SUR LES ÉQUIPEMENTS TANT QUE LE MANUEL SERVICE N'A PAS ÉTÉ CONSULTÉ ET COMPRIS.
- LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER CHEZ LE TECHNICIEN, L'OPÉRATEUR OU LE PATIENT DES BLESSURES DUES À DES DANGERS ÉLECTRIQUES, MÉCANIQUES OU AUTRES.

WARNUNG

- DIESES KUNDENDIENST-HANDBUCH EXISTIERT NUR IN ENGLISCHER SPRACHE.
- FALLS EIN FREMDER KUNDENDIENST EINE ANDERE SPRACHE BENÖTIGT, IST ES AUFGABE DES KUNDEN FÜR EINE ENTSPRECHENDE ÜBERSETZUNG ZU SORGEN.
- VERSUCHEN SIE NICHT, DAS GERÄT ZU REPARIEREN, BEVOR DIESES KUNDENDIENST-HANDBUCH ZU RATE GEZOGEN UND VERSTANDEN WURDE.
- WIRD DIESE WARNUNG NICHT BEACHTET, SO KANN ES ZU VERLETZUNGEN DES KUNDENDIENSTTECHNIKERS, DES BEDIENERS ODER DES PATIENTEN DURCH ELEKTRISCHE SCHLÄGE, MECHANISCHE ODER SONSTIGE GEFAHREN KOMMEN.

AVISO

- ESTE MANUAL DE SERVICIO SÓLO EXISTE EN INGLÉS.
- SI ALGÚN PROVEEDOR DE SERVICIOS AJENO A GEMS SOLICITA UN IDIOMA QUE NO SEA EL INGLÉS, ES RESPONSABILIDAD DEL CLIENTE OFRECER UN SERVICIO DE TRADUCCIÓN.
- NO SE DEBERÁ DAR SERVICIO TÉCNICO AL EQUIPO, SIN HABER CONSULTADO Y COMPRENDIDO ESTE MANUAL DE SERVICIO.
- LA NO OBSERVANCIA DEL PRESENTE AVISO PUEDE DAR LUGAR A QUE EL PROVEEDOR DE SERVICIOS, EL OPERADOR O EL PACIENTE SUFRAN LESIONES PROVOCADAS POR CAUSAS ELÉCTRICAS, MECÁNICAS O DE OTRA NATURALEZA.

ATENÇÃO

- ESTE MANUAL DE ASSISTÊNCIA TÉCNICA SÓ SE ENCONTRA DISPONÍVEL EM INGLÊS.
- SE QUALQUER OUTRO SERVIÇO DE ASSISTÊNCIA TÉCNICA, QUE NÃO A GEMS, SOLICITAR ESTES MANUAIS NOUTRO IDIOMA, É DA RESPONSABILIDADE DO CLIENTE FORNECER OS SERVIÇOS DE TRADUÇÃO.
- NÃO TENTE REPARAR O EQUIPAMENTO SEM TER CONSULTADO E COMPREENDIDO ESTE MANUAL DE ASSISTÊNCIA TÉCNICA.
- O NÃO CUMPRIMENTO DESTE AVISO PODE POR EM PERIGO A SEGURANÇA DO TÉCNICO, OPERADOR OU PACIENTE DEVIDO A' CHOQUES ELÉTRICOS, MECÂNICOS OU OUTROS.

AVVERTENZA

- IL PRESENTE MANUALE DI MANUTENZIONE È DISPONIBILE SOLTANTO IN INGLESE.
- SE UN ADDETTO ALLA MANUTENZIONE ESTERNO ALLA GEMS RICHIEDE IL MANUALE IN UNA LINGUA DIVERSA, IL CLIENTE È TENUTO A PROVVEDERE DIRETTAMENTE ALLA TRADUZIONE.
- SI PROCEDA ALLA MANUTENZIONE DELL'APPARECCHIATURA SOLO DOPO AVER CONSULTATO IL PRESENTE MANUALE ED AVERNE COMPRESO IL CONTENUTO.
- NON TENERE CONTO DELLA PRESENTE AVVERTENZA POTREBBE FAR COMPIERE OPERAZIONI DA CUI DERIVINO LESIONI ALL'ADDETTO ALLA MANUTENZIONE, ALL'UTILIZZATORE ED AL PAZIENTE PER FOLGORAZIONE ELETTRICA, PER URTI MECCANICI OD ALTRI RISCHI.

警告

- ・このサービスマニュアルには英語版しかありません。
- ・GEMS以外でサービスを担当される業者が英語以外の言語を要求される場合、翻訳作業はその業者の責任で行うものとさせていただきます。
- ・このサービスマニュアルを熟読し理解せずに、装置のサービスを行わ ないで下さい。
- ・この警告に従わない場合、サービスを担当される方、操作員あるいは 患者さんが、感電や機械的又はその他の危険により負傷する可能性が あります。

注意:

- 本维修手册仅存有英文本。
- 非 GEMS 公司的维修员要求非英文本的维修手册时, 客户需自行负责**翻**译。
- 未详细阅读和完全了解本手册之前,不得进行维修。
- 忽略本注意事项会对维修员,操作员或病人造成触 电,机械伤害或其他伤害。

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IMPORTANT!... X-RAY PROTECTIO

X-ray equipment if not properly used may cause injury. Accordingly, the instructions herein contained should be thoroughly read and understood by everyone who will use the equipment before you attempt to place this equipment in operation. The General Electric Company, Medical Systems Group, will be glad to assist and cooperate in placing this equipment in use.

Although this apparatus incorporates a high degree of protection against x-radiation other than the useful beam, no practical design of equipment can provide complete protection. Nor can any practical design compel the operator to take adequate precautions to prevent the possibility of any persons carelessly exposing themselves or others to radiation.

It is important that everyone having anything to do with x-radiation be properly trained and fully acquainted with the recommendations of the National Council on Radiation Protection and Measurements as published in NCRP Reports available from NCRP Publications, 7910 Woodmont Avenue, Room 1016, Bethesda, Maryland 20814, and of the International Commission on Radiation Protection, and take adequate steps to protect against injury.

The equipment is sold with the understanding that the General Electric Company, Medical Systems Group, its agents, and representatives have no responsibility for injury or damage which may result from improper use of the equipment.

Various protective material and devices are available. It is urged that such materials or devices be used.

CAUTION: United States Federal law restricts this device to use by or on the order of a physician.

CERTIFIED ELECTRICAL CONTRACTOR STATEMENT



All electrical installations that are preliminary to positioning of the equipment at the site prepared for the equipment shall be performed by licensed electrical contractors. In addition, electrical feeds into the Power Distribution Unit shall be performed by licensed electrical contractors. Other connections between pieces of electrical equipment, calibrations, and testing shall be performed by qualified GE Medical personnel. The products involved (and the accompanying electrical installations) are highly sophisticated, and special engineering competence is required. In performing all electrical work on these products, GE will use its own specially trained field engineers. All of GE's electrical work on these products will comply with the requirements of the applicable electrical codes.

The purchaser of GE equipment shall only utilize qualified personnel (i.e., GE's field engineers, personnel of third-party service companies with equivalent training, or licensed electricians) to perform electrical servicing on the equipment.

DAMAGE IN TRANSPORTATION

All packages should be closely examined at time of delivery. If damage is apparent, have notation "damage in shipment" written on all copies of the freight or express bill before delivery is accepted or "signed for" by a General Electric representative or a hospital receiving agent. Whether noted or concealed, damage MUST be reported to the carrier immediately upon discovery, or in any event, within 14 days after receipt, and the contents and containers held for inspection by the carrier. A transportation company will not pay a claim for damage if an inspection is not requested within this 14 day period.

Call Traffic and Transportation, Milwaukee, WI (414) 827-3468 / 8*285-3468 immediately after damage is found. At this time be ready to supply name of carrier, delivery date, consignee name, freight or express bill number, item damaged and extent of damage.

Complete instructions regarding claim procedure are found in Section "S" of the Policy & Procedure Bulletins. 6/17/94

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REVISION HISTORY

REV DATE	REASON FOR CHANGE	
А	June 25, 1999	Initial release for validation.
В	Aug. 16, 1999	Preliminary.
0	Aug. 17, 1999	Initial production release.
1	March 30, 2000	Updated part IDs. Added additional replacement procedures.
2	Sept. 29, 2000	Updated parts lists.
3	Nov. 22, 2002	Updated parts lists.
4	Dec. 31, 2002	Updated parts lists.
5	Feb. 20, 2003	Updated parts lists. Added FRU #2251497 to BOM2223147
6	Mar. 23, 2003	Updated Chiller procedures.
7	Apr. 12, 2003	Updated ADS workstation content.
8	Apr. 14, 2003	Revised format.
9	August 20, 2003	Removed all non–XQ/i coolant exchange procedures from Chapter 2.
10	Feb. 24, 2004	Corrected part number for Sun Blade 150 disk. Revised PDU replacement procedure for new style PDU (PCN 238341). Updated contents of Loopback Kit. Improved legibility of photos.
11	May 10, 2004	Updated with material for IP Server (Cotello). Updated configuration information for new USB Barcode scanner.
12	June 23, 2004	Updated part numbers and replacement procedures for wallstand conditioner due to new manufacturer (SMC).

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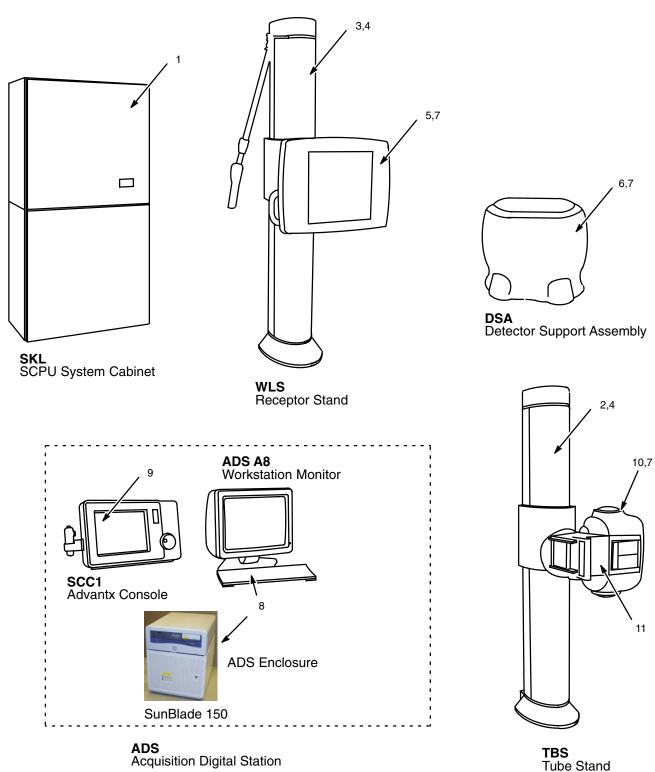
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CHAPTER 1 – RENEWAL PARTS

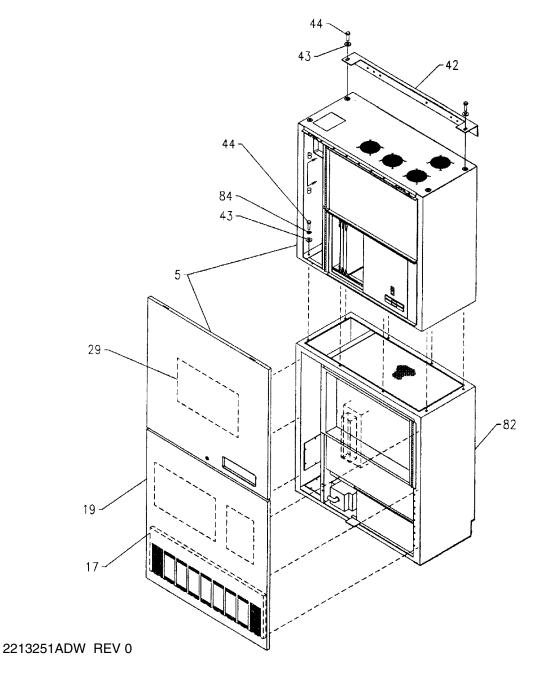
1-1 REVOLUTION XQ/i SYSTEM COMPONENTS



REVOLUTION XQ/i SYSTEM COMPONENTS & SOFTWARE

<u>ltem</u>	Designator	FRU	Part Number	Description (Remarks)
1	SKL	N	2213251	SCPU SYSTEM CABINET (SEE PAGE 1-3)
2	TBS	N	2203945	TUBE STAND (SEE PAGE 1-11)
3	WLS	N	2206092	RECEPTOR STAND (SEE PAGE 1-14)
4				RECEPTOR STAND &TUBE STAND COVERS (PAGE 1–18)
5			2219321	RECEPTOR HOUSING ASSEMBLY (SEE PAGE 1-19)
6	DSA	Ν	2242088	DETECTOR SUPPORT ASSEMBLY (SEE PAGE 1-23)
7			2237567	RECEPTOR, TUBE, AND DSA COVERS (SEE PAGE 1–27)
8	ADS	Ν	2363502	(120VAC) ACQUISITION WORKSTATION
		Ν	2363509	(240VAC) ACQUISITION WORKSTATION
		Ν	2405431	ADS WORKSTATION 120VAC (ready for DIE PC option)
		Ν	2405432	ADS WORKSTATION 240VAC (ready for DIE PC option)
		Ν	2405433	ADS WORKSTATION 120VAC (includes DIE PC option)
		Ν	2405434	ADS WORKSTATION 240VAC (includes DIE PC option)
9	SCC1	1	2224559	ADVANTX CONSOLE (SEE PAGE 1-48, 1-49 and 1-50)
10	TUBE	1	46-155400G277	MX100-18 0.6-1.25 (MIST GRAY)
11	COLLIMATOR	₹ 1	2212793	SA EAGLE TUBE STAND AUTOMATIC COLLIMATOR
12	SOFTWARE	1	2360864–9	XQ/i SYSTEM SOFTWARE COLLECTOR

1-2 UPPER/LOWER CABINET ASSY. 65KW, 50HZ 2213251



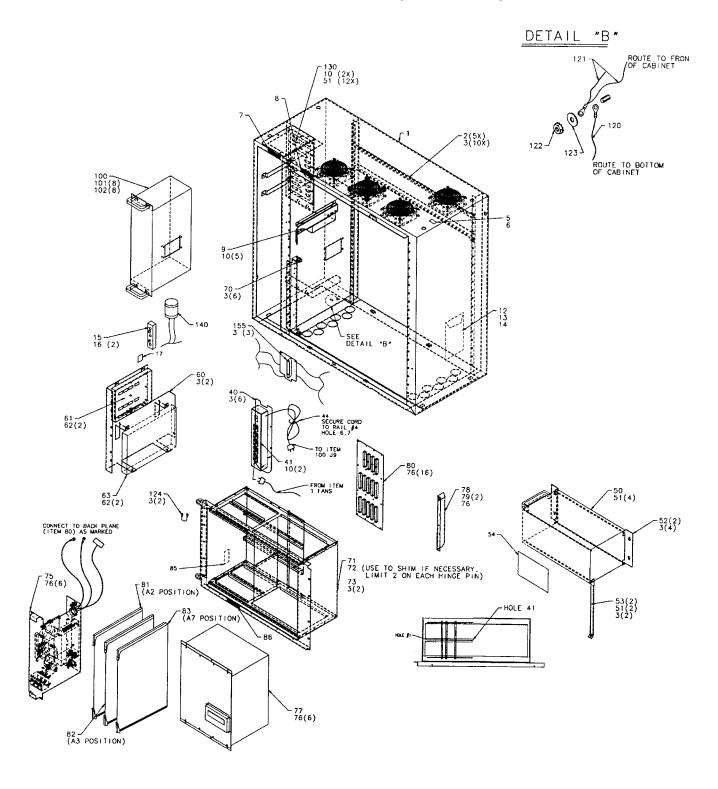
Note: All SCPU renewal parts information is in the SCPU Renewal Parts manual.

<u>Item</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
1	2268728	SYS CAB UP	N	1	SYSTEMS CABINET UPPER (See page1-4)

Systems Cabinet Upper, 2268728BOM, REV 0

<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
5	2212195	UP HALF CAB	N	1	EAGLE SYS, POS CAB, SCPU (SEE PAGE 1-5)
17	46-203134P6	FILTER	1	1	CABINET AIR FILTER
19	2185603	COVER	2	1	SCPU EMC LOWER COVER
41	46-302564P1	LABEL,TIP	2	3	CAUTION:THIS UNIT CAN TIP EASILY!
43	46-328430P4	WASHER	2	10	WASHER PLAIN - NORMAL 10.5 MM 20 MM
44	46-328416P20	SCREW	2	10	HEX HD 10MM 25MM ZINC PLATED, STEEL
82	2157009	ASSEMBLY	Ν	1	HF (SCPU)GENERATOR LOWER HALF
					(SEE SEPERATE MANUAL)
84	46-328432P4	WASHER	2	8	WASHER LOCK - SPRING 10.2 MM 18.1 MM
120	46-208758P5	CABLE TIE	2	6	13.38" X .301" SELF-LOCKING

1-3 SYSTEMS CABINET UPPER HALF 2212195 (PART 1 OF 2)



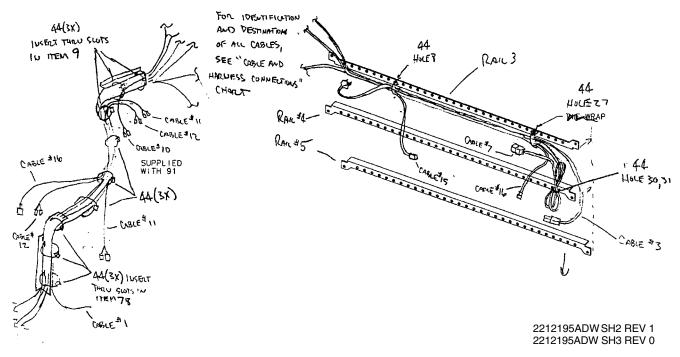
2212195ADW SH1 REV 1

SYSTEMS CABINET UPPER HALF 2212195 (PART 1 OF 2)

Note: All SCPU renewal parts information is in the SCPU Renewal Parts manual.

<u>Item</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
2 3 4 7	46–182503P1 46–208734P11 46–220288P1 46–233716P1	CHANNEL SCREW FASTENER OLD LABEL	2 2 2 2	5 43 35 1	B8A4B2 .1196 THK STL FORMED F50EX2A1 SELF-LOCKING 10-32 UNF WARNING-CERTAIN INTERNAL PARTS ARE
8	46-182519P1	LABEL OLD	2	1	WARNING-CERTAIN CIRCUITS IN THIS
9 10 12 15 16	2202779 46–312346P2 46–315992P1 46–240854P5 46–328417P15	HARNESS BRAC NUT ENVELOPE TERMINAL SCREW	2 2 2 2 2	1 9 1 1 2	9.5" X 6.5" BROWN KRAFT ENVELOPE. ALUMINUM TERMINAL STRIP (GND BAR) HEXAGON SOCKET 6 MM 25 MM
17 40 41 44 50	46–271110P1 2202630 46–189164P1 46–208758P3 2346842	LABEL POWER STRIP POWER SUPPLY TY-RAP OLD ASSEMBLY	2 2 2 2 1	2 1 1 12 1	PROTECTIVE EARTH (GROUND) POWER STRIP BRKT FOR EAGLE UPP CAB OUTLET STRIP 7.31" X .184" SELF-LOCKING CABLE TIE PC CONFIGURED FOR IDC ON EAGLE &FFDM
51 52 53 54 60	2103585 2192066 2214489 2232061 2192526	SCREW IDC MOUNTING BRACKET LABEL ECM/HUB BRAC	2 2 2 2 2	14 2 2 1 1	PAN HEAD 4 MM 8 MM EAGLE DARPA CABINET IDC MTG BRACKET IDC SUPPORT BRACKET – EAGLE SYS CAB. EAGLE1 IDC CONNECTOR DESIGNATION EAGLE DARPA ECM/HUB BRACKET
61 62 63 70 71	2111391 46–221563P2 2111390 2134897 2191414	HUB ASSEMBLY FASTENER OLD ECM SUPPORT BRAC RACK ASSEMBL	2 1 2	1 6 1 1	HUB ASSEMBLY RECEPTACLE CLIP-ON SOUTHCO EXPOSURE CONTROL MODULE CARD RACK SUPPT BKT EAGLE-DARPA RACK ASSEMBLY
72 73 75 76 77	1000904P529 46-220277P8 2194083 46-208734P18 2197212	WASHER OLD RET RING POWER SUPPLY SCREW TITAN ASC	2 2 N 2	2 1 1 20 1	ID 0.3910 OD 0.6880 THK .0500 EXT RADIAL MOUNT 0.375 SHAFT DIA EAGLE PWR SUPPLY ASM (SEE PAGE 1–10) SCREW TITAN ASC (PENTIUM W/O FLASH)
78 79 80 81 82	2212012 46–170015P73 2125006 46–321384G4 46–232850G2	BRACKET SCREW CIRCUIT BOAR PWB CIRCUIT BD	2 2 1 1	1 2 1 1	HARNESS SUPPORT BRACKET – CARDRACK RAD POSITIONER BACKPLANE I/O BOARD
83 84 85 86 100	46–288322G1 46–275098P1 46–220191P5 2221556–100 2264423	CIRCUIT BD CLAMP OR CLIP CLAMP OLD DOOR DIAGRAM POWER DISTRI	1 2 2 2 1	1 6 1 1	COLLIMATOR CONTROL/SERVO PANDUIT FCM3-A-14 GRAY EAGLE CARD STRIP CONDOR 3KVA PDU

1-4 SYSTEMS CABINET UPPER HALF 2212195 (PART 2 OF 2)



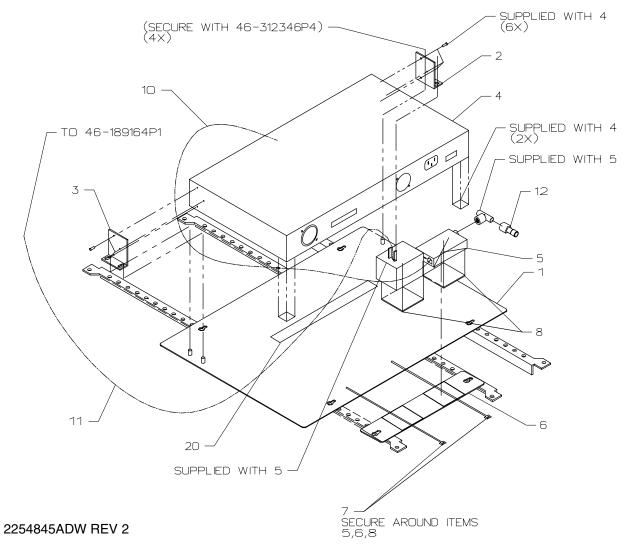
1	MAIN HARNESS	130	N/A	N/A	
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				17.7	ITEM 63 - J13
				1	ITEM 80 - J13
1				i	JIEM 80 - A3J3
F I				ł	ITEM 80 - A3J1 ITEM 80 - A7J1
				İ	LTEM 75 - J2
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2	480V POWER	140	ITEM 100 - J12		N/C
3 4	SWITCH TO BULKHEAD - SC FIBER IDC TO POWER STRIP - AC POWER	141	LIEM 94		ITEM 130 - J101
4	IDC TO FOWER STRIF - AC FOWER	142	LIEM 50 POWER		TOP PLUG
5	POS MOD TO POWER STRIP - AC POWER	143	ITEM 75 - J1	 	
1 -		1 ' ' 3	11211173		2ND PLUG
					FROM TOP
6	TITAN TO POWER STRIP - AC POWER	143	ITEM 77 - POWER	-	ITEM 41 -
				Į	3RD PLUG FROM TOP
7	SWITCH TO POWER STRIP - AC POWER	SUPPLIED W/91	ITEM 91 POWER	 -	ITEM 41 -
'		30176168 11731	TIEM STIGNER		4TH PLUG
					FROM TOP
8	IDC TO BULKHEAD FIBER	144	ITEM 50 - FIBER	_	JTEM 130 - J102
9	HUB TO ECM - GE BUS HUB TO BULKHEAD - GE BUS	145	TEM 61 - J12		ITEM 63 - J1,J2
11	HUB TO POS MOD - GE BUS	146	TEM 61 - J3 TEM 61 - J4	-	ITEM 130 - J19 ITEM 80 - U1.U2
12	HUB TO TITAN -GE BUS	146	TEM 61 - J4	 -	11TEM 77 - LOC
13	TDC TO BULKHEAD - RT BUS	147	ITEM 50 - RT BUS	-	TITEM 155
14	SWITCH TO IDC - ETHERNET SWITCH TO BUIKHEAD - ETHERNET	148			ITEM 50 - ENET
15 16	TITAN TO SWITCH - COAX	149	TEM 91 - J5X		ITEM 130 - J109
17	TITAN TO HUB - DC POWER	151	ITEM 77 - J13 ITEM 77 - J11		ITEM 95 ITEM 61 - J1
18	TITAN TO ECM - DC POWER	152	1 TEM 77 - J12	+	ITEM 63 - J25
19	TITAN TO EMC - RESET?	153	ITEM 77 - J31	-	ITEM 63 - J8
20	MAIN RT BUS	155	ITEM 130 - J107	156 157 (2)	ITEM 80 - A1J1
				158 (2)	ITEM 63 - J31
21	TITAN TO BULKHEAD - CONSOLE	160	1TEM 77 - J32	-	ITEM 130 - J1
_22	TITAN TO BULKHEAD - GENERATOR	161	1 TEM 77 - J28	-	ITEM 130 - J18
23	ECM TO BULKHEAD - GENERATOR	162	ITEM 63 - J12	-	TEM 130 - J17
2 4 25	IDC TO BULKHEAD - CHILLER STATUS	165 166	ITEM 50 ~ COM1		TEM 130 - J103 TEM 130 - J104

SYSTEMS CABINET UPPER HALF 2212195 (PART 2 OF 2)

Note: All SCPU renewal parts information is in the SCPU Renewal Parts manual.

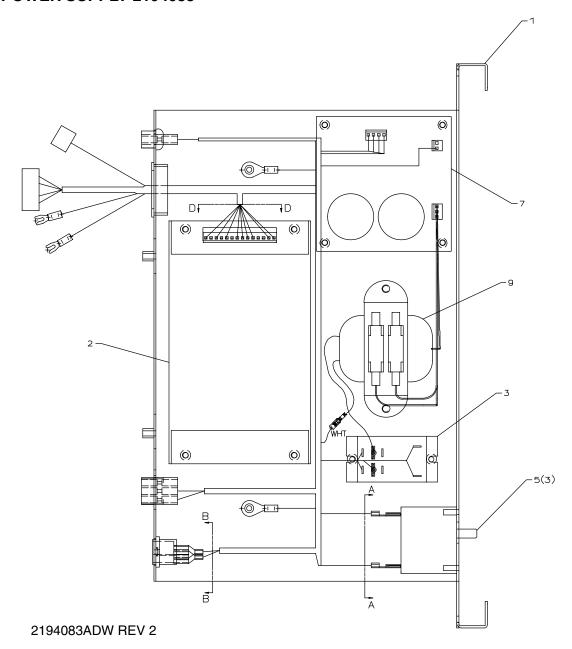
<u>Item</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
101 102 120 121 122	46–328416P11 46–328431P2 2108155 2149353 46–312346P4	SCREW WASHER GROUND LEAD LEAD DATA NUT	2 2 2 2 2	8 8 1 1 5	HEXAGON HEAD 6 MM 16 MM WASHER PLAIN – LARGE 6.4 MM 18 MM SCPU COVER GROUND LEADS
123 124 130 137 140	46–328430P3 46–177502G38 2215717 46–170015P60 2204689	WASHER LEAD MAIN HARNESS SCREW WIRE AND CAB	2 2 2 2 2	1 1 1 8 1	WASHER PLAIN – NORMAL 6.4 MM 12 MM GROUND LEAD (STRAP) FOR USE ON MAIN HARNESS FOR EAGLE SYSTEMS CAB. 480V POWER CABLE FOR EAGLE SYS CAB.
141 142 143 144 145	2208907–6 2208804 2208804–2 2340422–8 2118610	FIBER OPTIC POWER CORD POWER CORD FIBER OPTIC CABLE,FIBER	2 2 2 2 2	1 1 2 1 1	FIBER OPTIC CABLE, 1370MILLIMETERS POWER CORD 1FT LONG POWER CORD 5 FT LONG FIBER OPTIC CABLE, 500 MILLIMETERS GE BUS INTERNAL
146 147 148 149 150	2118610-2 2241169 2215028-7 2270746 46-251920G36	CABLE ASSEMB CABLE PT CABLE UTP CA CABLE UTP CA CABLE ASM	2 2 2 2 2	3 1 1 1	GE BUS INTERNAL EAGLE CONNECTOR SIB AND J19 CHAMP UTP CAT 5 PATCH CORD CABLE 0.6 M LNG UTP CAT 5 PATCH CORD CABLE 0.85M LNG 50 OHM COAX, 72 +\- 2.00 IN.
151 152 153 156 157	2204805 2204805–2 2204812 2131119 46–220185P27	CABLE CABLE CABLE CONNECTOR HA SCREW	2 2 2 2 2	1 1 1 1 2	TITAN J11 TO HUB J1 TITAN J12 TO ECM J25 TITAN J31 TO ECM J8 CONNECTOR HARDWARE 21.844 MM
158 160 161 162 163	46–170012P34 2204814 2204810 2122860–2 2131132	NUT OLD CABLE CABLE CABLE ASSEMB CONNECTOR HW	2 2 2 2 2	2 1 1 1 3	4–40, 1/4" HEX, 3/32 THICK KEPS NUT TITAN J32 TO BULKHEAD J1 TITAN J28 TO BULKHEAD J18 ECM TO POWER UNIT/CONTACTOR. 37 POS CONNECTOR HARDWARE
164 165 166 167 169 170	46–208916P8 2216031 2216032 46–221417P1 2244317 2254845	SCREW CABLE CABLE CONNECTOR LABEL ETHERNET SW	2 2 2 2 2 N	6 1 1 2 1	IDC COM 1 TO BULKHEAD J103 IDC CAN 1 TO BULKHEAD J104 FEMALE SCREWLOCKS, TWO PER KIT CE LABEL FOR EAGLE ETHERNET SW ASM. SEE PAGE 1–9.

1-5 ETHERNET SWITCH ASSEMBLY 2254845



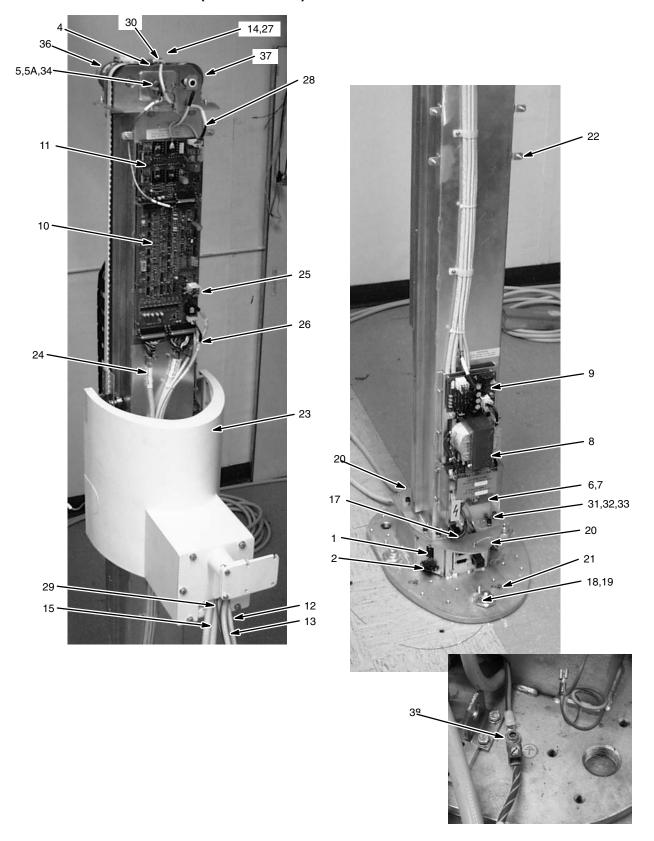
<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
				-	• • •
4	2254537	10/100 ETH SW	1	1	EAGLE1 10/100 FAST ETHERNET SWITCH
5	2254608	ETH COAX-UTP	1	1	EAGLE1 ETHERNET COAX-UTP CONVERTER

1-6 POWER SUPPLY 2194083



<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
				•	. , ,
2	2193520	POWER SUPPLY	1	1	POWER SUPPLY (SWITCHING) 4 OUTPUTS
3	2241053	RELAY	2	1	
5	46-311445P4	CIRCUIT BREA	2	3	CIRCUIT BREAKER 3 AMPS 250 VAC
7	46-264102G1	CIRCUIT BD	1	1	COLL SERVO P.S.
9	2211925	TRANSFORMER	2	1	TRANSFORMER FOR COLLIMATOR MOTOR

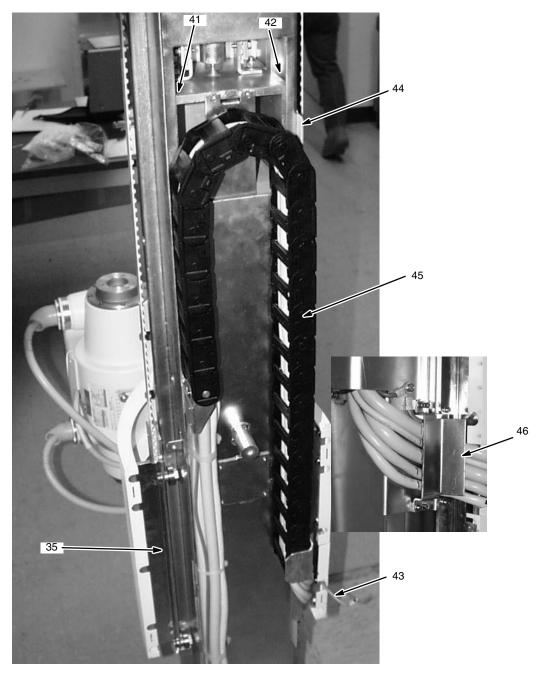
1-7 TUBE STAND 2203945 (PART 1 OF 2)



TUBE STAND 2203945 (PART 1 OF 2)

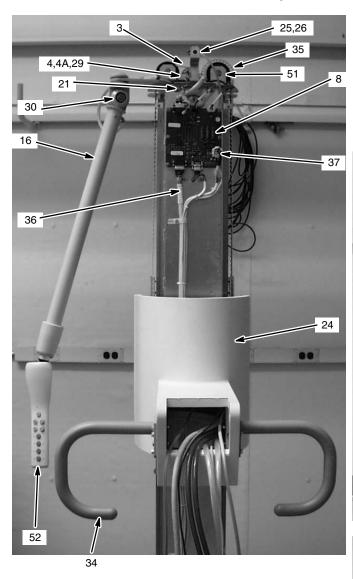
<u>Item</u>	Designator FF	RU	Part Number	Description (Remarks)
1	SWITCH	1	2237638	ON/OFF BREAKER SWITCH IEC 320 ISOLATED RECEPTACLE TIMING BELT KIT POTENTIOMETER KIT POTENTIOMETER ASSEMBLY
2	RECEPTACLE	1	2237639	
4	BELT	1	2269052	
5	POT ASM	1	2269051	
5A	POT ASM	1	2244350	
6 7 8 9 10	CKT BOARD FUSE XFORMER PWR SUPPLY CKT BOARD	1 1 1 1	2238038 46-954358P31 2238039 2237652 2238040	EAGLE1 TUBE STAND AC BOARD FUSE LF 326 8A EAGLE1 TUBE STAND TRANSFORMER PLACA EAGLE 1 POWER SUPPLY 1 PCB SERVO CONTROL BOARD
11 12 13 14 15	CKT BOARD CABLE CABLE LAMP CABLE	1 1 1 1	2238041 2238043 2238045 46-954414P21 2238049	PCB SERVO POWER BOARD ROTOR CABLE COLLIMATOR CONTROL CABLE ARGON LAMP 125V 1/3 W HV CABLE 14'8"
16	LABEL	1	2238056	TS KIT LABEL A.C. HARNESS LEVELING LEVELING NUT COVER GROUND CABLE
17	HARNESS	2	2237640	
18	LEVELING	2	2237642	
19	LEVELING NUT	2	2237641	
20	CABLE	2	2237643	
21	CLAMP	2	2237644	CLAMP 8 MM BALL PLUNGER RAPID REF. R6652 CARRIAGE EAGLE 1 TUBE STAND SYSTEM CABLE TUBE STAND DC SUPPLY CABLE
22	PLUNGER	2	2237705	
23	CARRIAGE	2	2237711	
24	CABLE	2	2238042	
25	CABLE	2	2238046	
26 27 28 29 30	CABLE CABLE CABLE CABLE CLAMP	2 2 2 2 2	2238047 2237662 2238048 2238051 2237702	EAGLE 1 TUBE STAND 24VAC CABLE POWER ON LIGHT W/CABLE EAGLE1 T.S. MOTOR CABLE TUBE GROUND CABLE METAL CABLE CLAMP FOR MOTOR CABLE
31	PLUG	2	2237648	240VAC PLUG
32	PLUG	2	2237649	120VAC PLUG
33	JUMPER	2	2237650	SINGLE PHASE JUMPER
34	SET SCREW	2	46–951257P03	M3X6 SET SCREW FOR POTENTIOMETER PULLEY
35	SUPPORT	2	2237710	RIGHT SUPPORT
36	MOTOR	1	2244352	MOTOR DRIVE ASSEMBLY
37	PULLEY	1	2244353	TUBE STAND TOP PULLEY ASSEM.(LESS MOTOR DRIVE)
38	TERMINAL	2	46–316818P2	CHASSIS GROUND TERMINAL ON REAR OF BASE

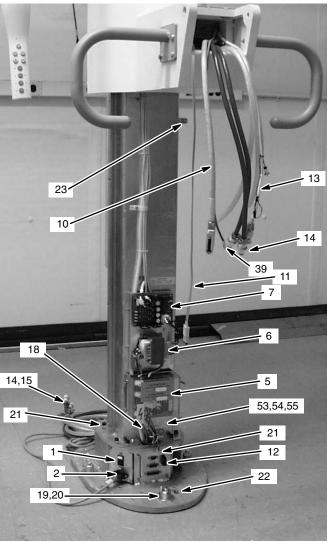
1-8 TUBE STAND 2203945 (PART 2 OF 2)

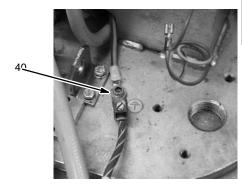


<u>ltem</u>	Designator	FRU	Part Number	Description (Remarks)	
41	BAND	2	2237706	NARROW TEFLON BAND	
42	BAND	2	2237708	WIDE TEFLON BAND	
43	CABLE	2	2238050	CARRIAGE GROUND CABLE	
44	BAND	2	2238053	CHAIN TEFLON BAND	
45	CABLE	2	2238054	CABLE CHAIN SET	
46	BRACKET	2	2238052	CABLE GUIDE/CLAMP	
45	CABLE	2	2238054	CABLE CHAIN SET	

1-9 RECEPTOR STAND 2206092 (PART 1 OF 2)







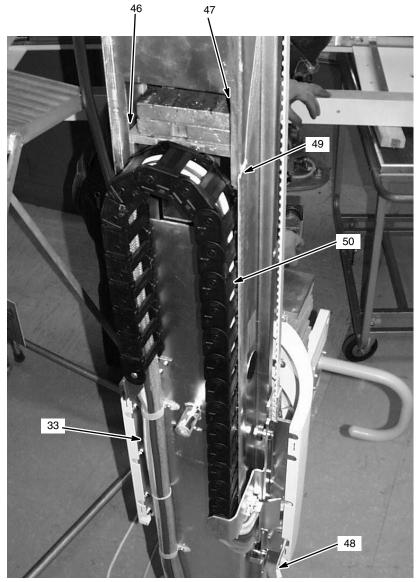
REV 12

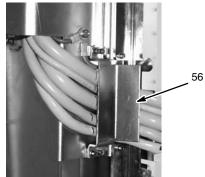
DIRECTION 2219417-100

RECEPTOR STAND 2206092 (PART 1 OF 2)

<u>ltem</u>	Designator FF	RU	Part Number	Description (Remarks)
1 2 3 4 4A 5	SWITCH RECEPTACLE BELT POT ASM POT ASM CKT BOARD	1 1 1 1 1	2237638 2237639 2269052 2269051 2244350 2237647	ON/OFF BREAKER SWITCH IEC 320 ISOLATED RECEPTACLE TIMING BELT KIT POTENTIOMETER KIT POTENTIOMETER ASSEMBLY EAGLE1 WALL STAND AC BOARD
6 7 8 9 10	XFORMER PWR SUPPLY CKT BOARD CABLE CABLE	1 1 1 1	2237651 2237652 2237653 2237655 2237656	EAGLE1 WALL STAND TRANSFORMER PLACA EAGLE 1 POWER SUPPLY 1 EAGLE1 WALL STAND CONTROL BOARD EAGLE 1 W.S. ION CH. CABLE EAGLE 1 W.S. DETECTOR CABLE
11 12 13 14 15	CABLE RECEPTACLE CABLE COUPLER COUPLER	1 1 1 1	2237657 2237658 2237659 2270028 2270028–2	OPTICAL FIBER AMP 504971–4 OPTICAL FIBER REC. AMP 1–502776–0 EAGLE 1 W.S. INT. DETECTOR CABLE COUPLER MALE REPLACEMENT KIT COUPLER FEMALE REPLACEMENT KIT
16 17 18 19 20	ARM LABEL HARNESS LEVELING LEVELING NUT	1 1 2 2 2	2237667 2237669 2237640 2237642 2237641	CONTROL ARM WS LABEL KIT A.C. HARNESS LEVELING LEVELING NUT
21 22 23 24 25	CABLE CLAMP PLUNGER CARRIAGE CABLE	2 2 2 2 2	2237643 2237644 2237705 2237711 2237662	COVER GROUND CABLE CLAMP 8 MM BALL PLUNGER RAPID REF. R6652 CARRIAGE POWER ON LIGHT W/CABLE
26 27 29 30	LAMP SCREW SET SCREW DUST COVER	2 2 2 2	46-954414P21 2237701 46-951257P03 2270026	ARGON LAMP 125V 1/3 W SCREW D9636X323 UNC X10 A2 M3X6 SET SCREW FOR POTENTIOMETER PULLEY DUST COVER FOR EAGLE CONTROL ARM
31 32 33 34 35	SCREW SCREW SUPPORT BAR LOCK	2 2 2 2 1	46-951201P27 46-951201P48 2237710 2242582 2244349	HEX HEAD SCREW M6X20 HEX HEAD SCREW M8X25 RIGHT SUPPORT PATIENT HAND REST FOR EAGLE1 LOCK ASSEMBLY
36 37 38 39 40	CABLE CABLE CLAMP CABLE TERMINAL	2 2 2 2 2	2237654 2237661 2238057 2238060 46-316818P2	EAGLE 1 W. S. SYSTEM CABLE WALL STAND DC SUPPL CABLE CLAMP SERTO REF SO 40512–11–13 DETECTOR GROUND CABLE CHASSIS GROUND TERMINAL ON REAR OF BASE

1-10 RECEPTOR STAND 2206092 (PART 2 OF 2)

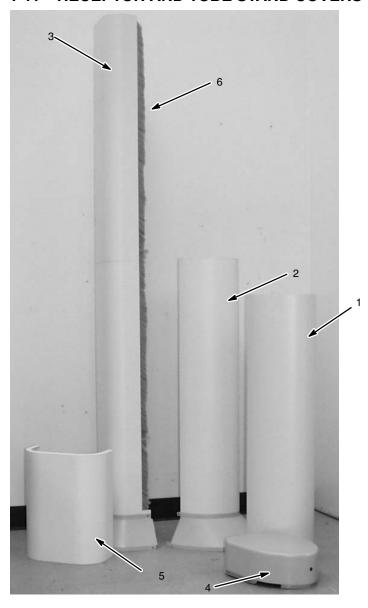




RECEPTOR STAND 2206092 (PART 2 OF 2)

<u>ltem</u>	Designator	FRU	Part Number	Description (Remarks)
42	SCREW	2	46-951201P29	HEX HEAD SCREW M6X30
43	ROD	2	46-951255P23	THREADED ROD M4X6
44	ROD	2	2238070	THREADED ROD M4X16
45	SCREW	2	46-951200P50	HEX HEAD SCREW M4X35
46	BAND	2	2237706	NARROW TEFLON BAND
47	BAND	2	2237708	WIDE TEFLON BAND
48	CABLE	2	2238050	CARRIAGE GROUND CABLE
49	BAND	2	2238053	CHAIN TEFLON BAND
50	CABLE	2	2237666	CABLE CHAIN SET
51	PULLEY	1	2244351	WALL STAND TOP PULLEY ASSEMBLY EAGLE WALL STAND CONTROL PANEL 240VAC PLUG 120VAC PLUG SINGLE PHASE JUMPER CABLE GUIDE/CLAMP
52	CONTROL	1	2211296	
53	PLUG	2	2237648	
54	PLUG	2	2237649	
55	JUMPER	2	2237650	
56	BRACKET	2	2238052	

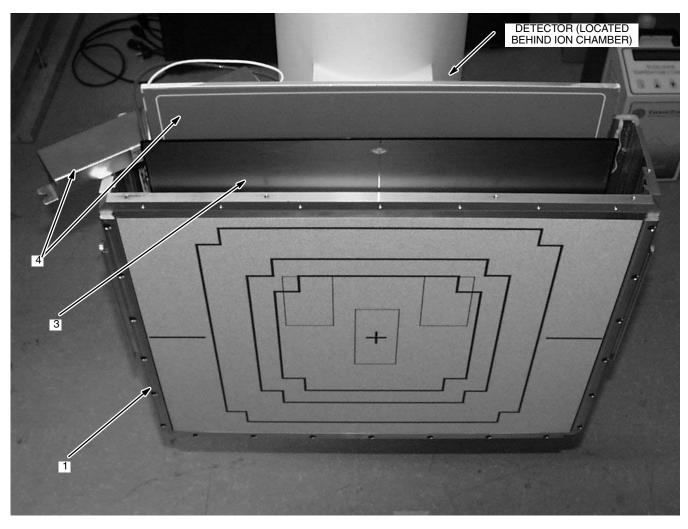
1-11 RECEPTOR AND TUBE STAND COVERS



<u>ltem</u>	Designator	FRU	Part Number	Description (Remarks)		
	001/50	•		DECENTED STAND LIDDED EDGALT COLUED (DI ACTIO)		
1	COVER	2	2263038	RECEPTOR STAND UPPER FRONT COVER (PLASTIC)		
1	COVER	2	2263042	TUBE STAND UPPER FRONT COVER (PLASTIC)		
2	COVER	2	2263039	LOWER FRONT COVER		
3	COVER	2	2263040	RECEPTOR STAND BACK COVER (PLASTIC)		
3	COVER	2	2263043	TUBE STAND BACK COVER (PLASTIC)		
4	COVER	2	2263041	RECEPTOR STAND TOP COVER (PLASTIC)		
4	COVER	2	2263044	TUBE STAND TOP COVER (PLASTIC)		
5	COVER	2	2238062	CARRIAGE BACK COVER (METAL)		
6	BRUSH	2	2237636	BACK COVER BRUSH		
7	CLIP	2	2237635	BALL PLUNGER CLIP RAPID REF C4434-3		
				(NOT SHOWN-USED INSIDE ALL COVERS)		

PLASTIC COVERS WILL FIT ON UNITS ORIGINALLY SUPPLIED WITH METAL COVERS BUT ALL THE COVERS (1 THROUGH 4) MUST BE ORDERED AND REPLACED AT THE SAME TIME.

1-12 RECEPTOR ASSEMBLY 2219321 (B1000LB)

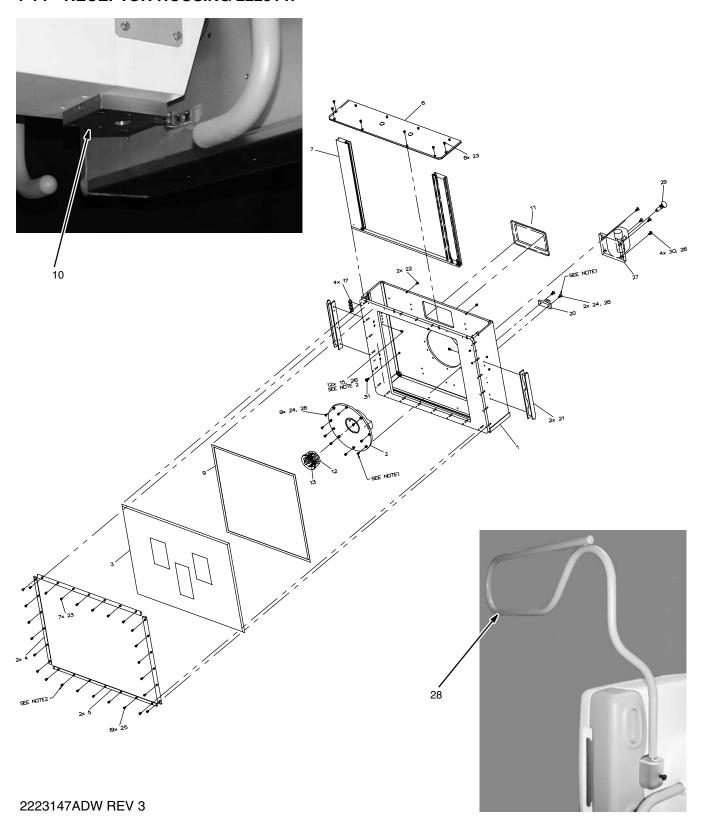


<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
				-	. , ,
1	2223147	REC HOUSING	2	1	EAGLE1 RECEPTOR HOUSING
3	46-286129P46	GRID	1	1	13:1 180CM 78L/CM C-SKIN AL-INNER
4	2210104	ION CHAMBER	1	1	ION CHAMBER WITH PRE-AMP

1-13 41CM DIGITAL RAD DETECTOR, 2200286BOM, REV 5

<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
	2200286	DETECTOR	1	1	41CM DIGITAL RAD DETECTOR -NOT SHOWN

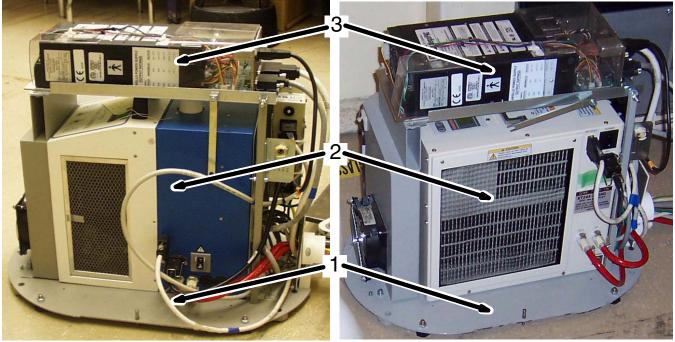
1-14 RECEPTOR HOUSING 2223147



RECEPTOR HOUSING 2223147

<u>Item</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
1 2	2234670	EPOXY/PICT PIVOT	2	1	EPOXY ASSEMBLY W/PICTURE FRAME RECEPTOR PIVOT MOUNT FOR WALLSTAND
3	2226137 2227538	PATIENT BARR	1	1	RECEPTOR PIVOT MOUNT FOR WALLSTAND
3 4	2223005	BARRIER HOLD	2	2	REC ASSEM PATIENT BARRIER HOLD
5	2223003	BARRIER HOLD	2	2	REC ASSEM PATIENT BARRIER HOLD
3	2223004	DAMMENTIOLD	_	۷	NEC ASSEMITATIENT BANNIEN HOLD
6	2234669	TOP PLATE AS	2	1	TOP PLATE ASSEMBLY FOR EAGLE1
7	2234668	ION/GRID GUI	2	1	ION/GRID GUIDE ASSEMBLY HOLDING
9	2216436	BARRIER GASK	2	1	EAGLE1 WALLSTAND BARRIER GASKET
10	2236026	RECEPTOR HOU	2	1	EAGLE1 RECEPTOR HOUSING ADJUSTMENT
11	2232333	GASKET	2	1	RUBBER SEAL ON RECEPTOR BACK PLATE
12	2213518	CLAMP	2	1	CABLE PLUG CLAMP EAGLE WALLSTAND
13	2213518–2	CLAMP	2	1	CABLE PLUG CLAMP EAGLE WALLSTAND
15	2103580–3	SCREW	2	12	COUNTERSUNK HEA 4 MM 12 MM
17	2236811	MISCELLANEOUS	3 2	4	PLUGS FOR PRE-AMP BOX - REC HOUSING
19	46-328419P19	SCREW	2	2	HEXAGON SOCKET 12 MM 30 MM
01	0007560	BAR EXTRUSIO	2	0	RECEPTOR ACCESSORY BAR EXTRUD
21	2227563		2	2 2	
22	46–328417P4	SCREW			HEXAGON SOCKET 4 MM 12 MM
23	2103580-3	SCREW	2	13	COUNTERSUNK HEA 4 MM 12 MM
24 25	2103580-13	SCREW	2	11	COUNTERSUNK HEA 6 MM 16 MM
25	2103580–7	SCREW	2	19	COUNTERSUNK HEA 4 MM 30 MM
28	2242582	STEEL TUBING	2	1	PATIENT HAND REST FOR EAGLE1

1-15 DSA MAIN ASSEMBLY 2242088-2



WITH THERMOTEK CONDITIONER

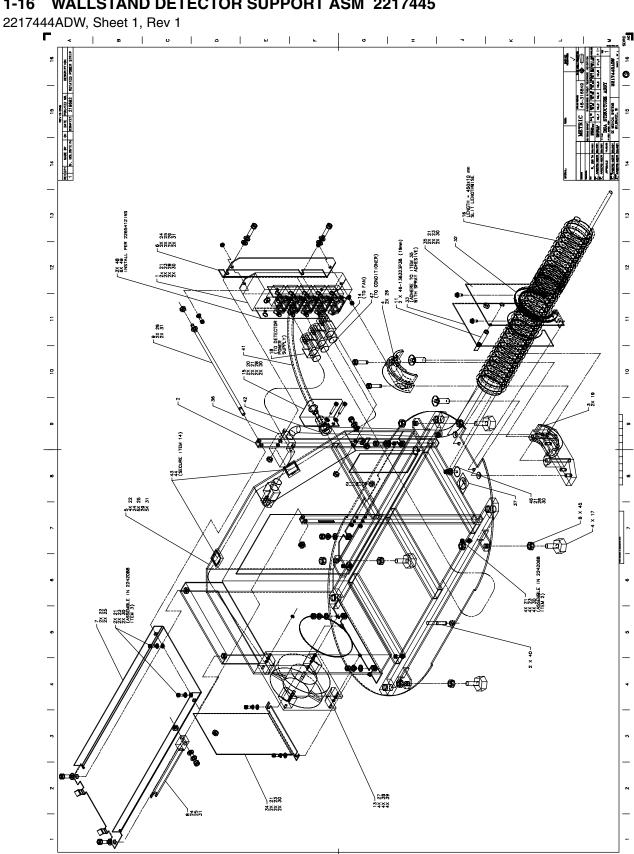
WITH SMC CONDITIONER

2242088-2 REV 1

<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
				-	. ,
1	2217445	DETECTOR SUP	Ν	1	EAGLE DETECTOR SUPPRT ASM
2a	2210405-15	CHILLER	1	1	CHILLER (THERMOTEK)
2b	2375089	CHILLER	1	1	CHILLER (SMC)
3	2292162-2	DETECTOR POW	/ 1	1	POWER SUPPLY

COOLANT KIT 2295518 CONTAINING PARTS FOR FLUSHING AND REFILLING CONDITIONER IS ORDERABLE AS A FRU 1.

1-16 WALLSTAND DETECTOR SUPPORT ASM 2217445



WALLSTAND DETECTOR SUPPORT ASM 2217445

<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
1 2 3 4 5	2151636-5 2240091 2240092 2240093 2240094	PWR STRIP DSA STRUCTUR DSA STRAIN DSA STRAIN DSA FAN DUCT	2 2 2 2 2	1 1 1 1	IEC320 POWER STRIP W/4 OUTLETS DSA STRUCTURAL FRAME DSA CABLE STRAIN RELIEF BOTTOM DSA CABLE STRAIN RELIEF TOP DSA FAN DUCT
6 7 8 9 11	2240095 2240096 2240097 2240338 46–221914P7	DSA PWR STRIP DSA PWR SUPP DSA SUPPORT BAR LAMP	2 2 2 2 2	1 1 1 1	DSA POWER STRIP MOUNTING BRACKET DSA POWER SUPPLY MOUNT BRACKET DSA POWER SUPPLY MOUNT SUPPORT BAR DSA POWER SUPPLY TILT ROD LAMP ASSEMBLY INDICATOR
13 14 15 16 17	2243710 2244825 2244828 2244846 2244843	EXHAUST FAN FAN HARNESS HOSE CONNECT MISCELLANEOUS GUIDE		1 1 1 1 4	EAGLE1 DSA EXHAUST FAN EAGLE1 DSA FAN HARNESS EAGLE1 DSA HOSE CONNECT MOUNT EAGLE1 DSA HOSE COVER EAGLE1 DSA LEVELER GUIDE
18 32 33 34 35	2221466 46–221561P2 2244845 2249021 2249021–2	PART CLAMP OR CLIP FILTER DSA PERF SCRN DSA PERF SCRN		1 0.600 1 1 1	POWER CORD (IEC 320 BOTH ENDS) 1 FT VINYL TRIM W/ SEGMENTED METAL CORE. EAGLE1 DSA FILTER EAGLE1 DSA PERF SCREEN-FAN SIDE EAGLE1 DSA PERF SCREEN-HARNESS SIDE
36 37 40 41 42	2231826 46–240574P2 2249222 2209194–3 2209200–5	CABLE LABEL DSA COVER PIN POLYURETHANE HOSE COUPLING		1 1 2 0.305 1	DSA TO EAGLE WALL STAND INTERNATIONAL GND SYMBOL EAGLE1 DSA COVER LOCATOR PIN HYTRON HAW04;1/4"ID X .44'OD QUICK DISCONNECT HOSE COUPLING
46 47	2231833 2265671	GROUND LEAD POWER CABLE	2 2	1 1	DSA TO EAGLE WALL STAND 0,5 METER +/-25MM

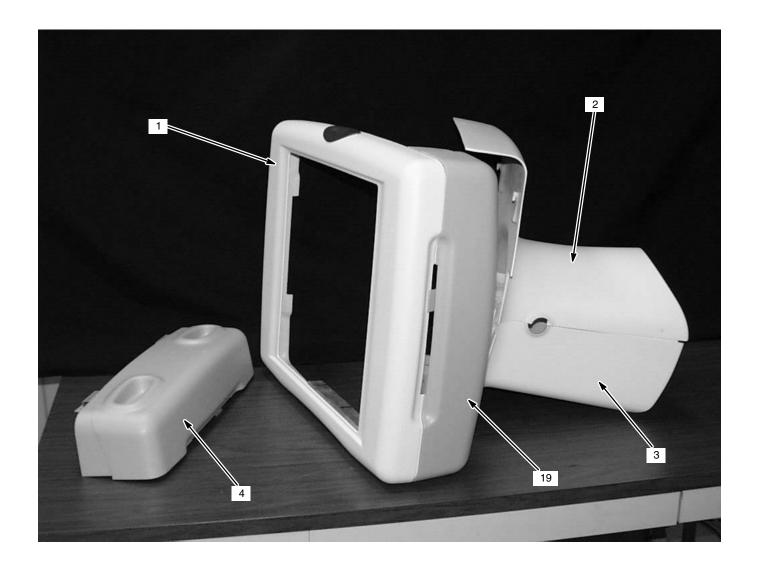
REV 12

DIRECTION 2219417-100

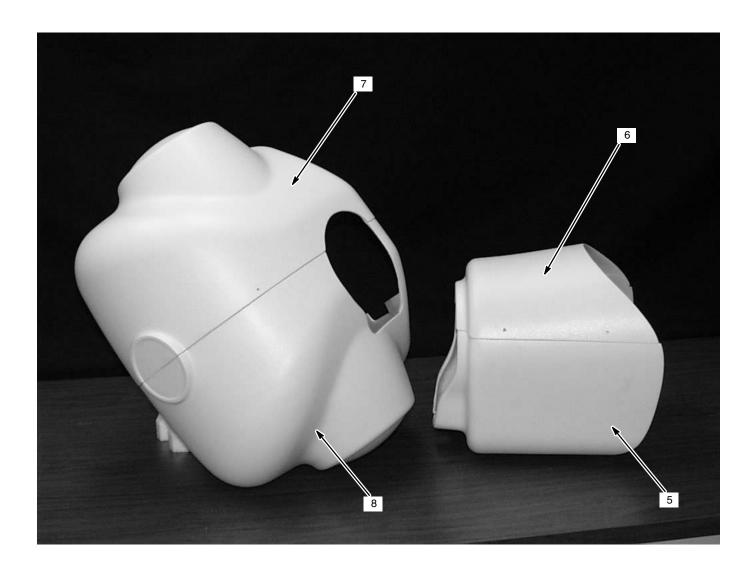
1-17 COOLANT KIT 2260360

COOLANT KIT 2260360 CONTAINING PARTS FOR FLUSHING AND REFILLING CONDITIONER IS ORDERABLE AS A FRU 1.

1-18 WALL/TUBESTAND COVER COLLECTOR 2237567 (Part 1 of 3)



WALL/TUBESTAND COVER COLLECTOR 2237567 (Part 2 of 3)



DIRECTION 2219417-100

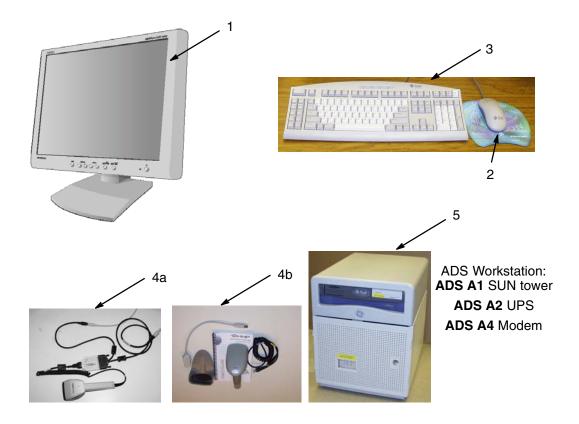
WALL/TUBESTAND COVER COLLECTOR 2237567 (Part 3 of 3)



WALL/TUBESTAND COVER COLLECTOR 2237567

<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
				-	• •
1	2227435	FRONT COVER	2	1	EAGLE1 RECEPTOR FRONT BEZEL COVER
2	2227436	TOP REAR COV	2	1	EAGLE1 RECEPTOR TOP REAR COVER
3	2227437	BOTTOM REAR	2	1	EAGLE1 RECEPTOR BOTTOM REAR COVER
4	2227485	LOCK SWITCH	2	1	EAGLE1 WALLSTAND LOCK SWITCH ASSY
5	2236790	TUBE CARRIAG	2	1	EAGLE TUBESTAND CARRIAGE COVER
6	2233615	TUBE CARRIAG	2	1	EAGLE1 XRAY TUBE CARRIAGE COVER
7	2229058	TUBE COVER T	2	1	EAGLE1 TUBE COVER TOP
8	2229059	TUBE COVER B	2	1	EAGLE1 TUBE COVER BOTTOM
19	2227485-2	LOCK SWITCH	2	1	EAGLE1 WALLSTAND LOCK SWITCH ASSY
24	2249144	TUBE COVER H	2	1	EAGLE1 TUBE COVER HARNESS DOOR-TOP
25	2249144–2	TUBE COVER H	2	1	EAGLE1 TUBE COVER DOOR-BOTTOM
26	2249463	DSA COVER	2	1	EAGLE1 DSA COVER
27	2247628	TUBE ID LOCA	2	1	EAGLE1 TUBE ID LOCATOR LABEL-COVER
28	2249281	TUBE COVER E	2	1	EAGLE1 TUBE COVER EMBLEM ASM
33	2262604	LABEL-NO STA	2	1	EAGLE1 DSA LABEL-NO STANDING ON UNIT

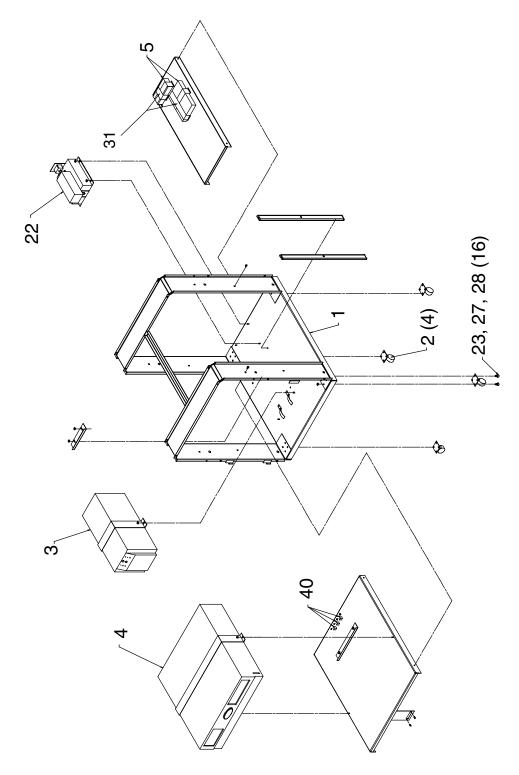
1-19 ACQUISITION DIGITAL STATION COMPONENTS



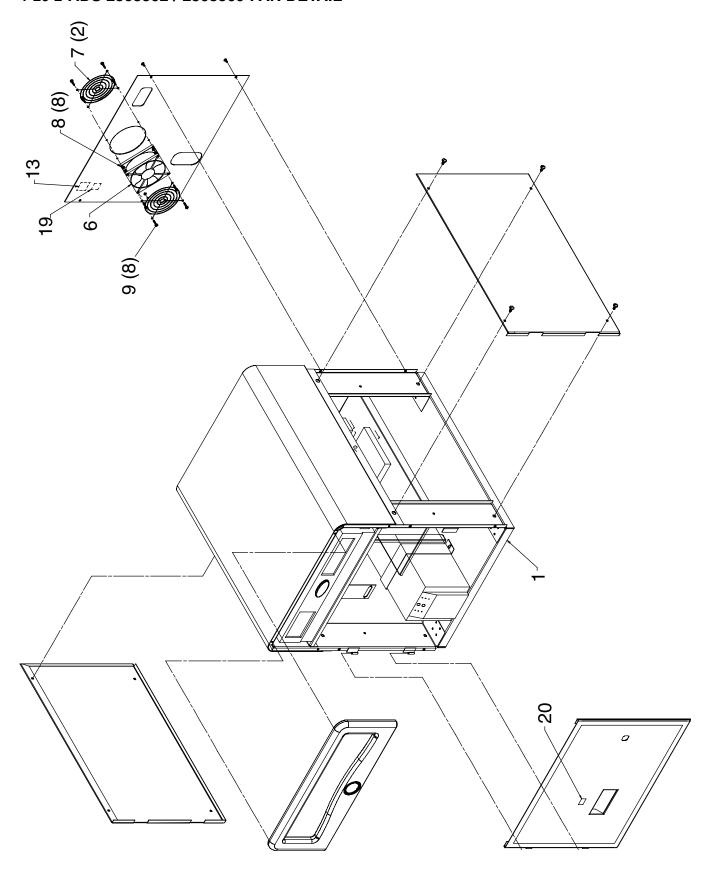
<u>ltem</u>	Designator	FRU	Part Number	Description (Remarks)
1	MONITOR	1	2349792	ADS MONITOR
1a 1b	CABLE PT CABLE	2 2	2308522 2317143	SVGA HDDB15M/M MONITOR CABLE – 15FT POWER CORD IEC60320 2M
2 3 4a 4b	MOUSE KEYBOARD BarCode Reade BarCode Reade		2356750 2356742 2239261 2399877	ADS MOUSE ADS KEYBOARD ADS BAR CODE READER KIT (for SUN U10) ADS BAR CODE READER KIT (for SunBlade 150)
5	WORKSTATION WORKSTATION		2363502 2363509	ADS WORKSTATION 120VAC (see Section 1-20) ADS WORKSTATION 240VAC (see Section 1-20)
	WORKSTATION WORKSTATION		2405433 2405434	ADS WORKSTATION 120VAC w / DIE PC option (see Sec. 1-21) ADS WORKSTATION 240VAC w / DIE PC option (see Sec. 1-21)
	WORKSTATION WORKSTATION		2405431 2405432	ADS WORKSTATION 120VAC-ready for DIE PC option (Sec. 1-21-1) ADS WORKSTATION 240VAC-ready for DIE PC option (Sec. 1-21-1)

1-20 ADS 2363502, REV 4 (120VAC) / 2363509, REV 4 (240VAC)

1-20-1 ADS 2363502 / 2363509 BODY DETAIL



1-20-2 ADS 2363502 / 2363509 FAN DETAIL



1-20-3 ADS WORKSTATION (120 VAC) 2363502 REV 4

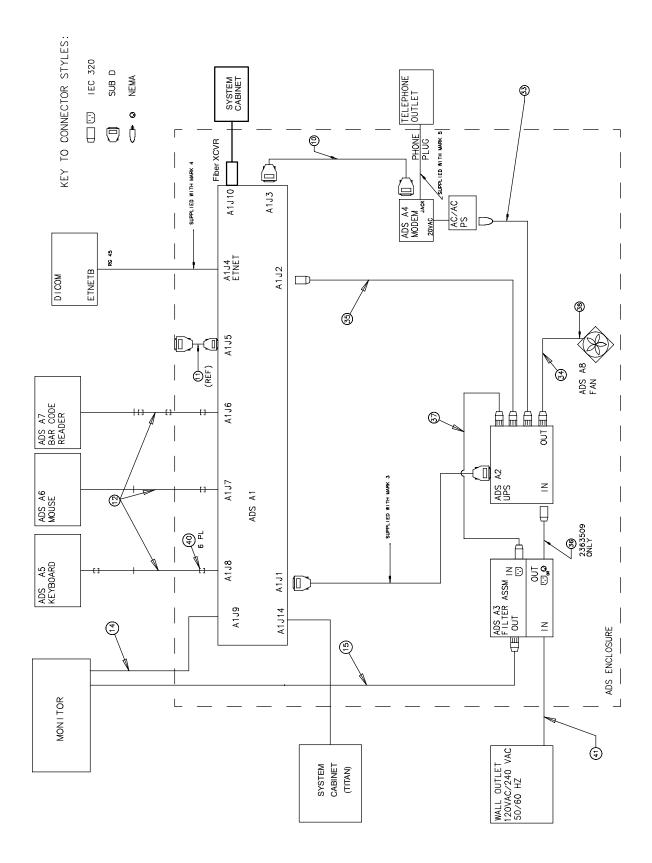
Note: Refer to the diagram on the following page for help with cable identification.

Item	Part Number	Name	FRU	Quantity	Description (Remarks)
1	2362641	PART	Ν	1	ADS ENCLOSURE (see Sec. 1-20-6)
2	2362280	PART	1	4	CASTER ECONO-LITE
3	2221460	PART	1	1	EAGLE UPS 120 VAC (see Sec. 1-22)
4	2355051	PART	1	1	GIPETO ADS WORKSTATION (see Sec. 1-23)
5	2245794	PART	1	1	GLOBAL MODEM KIT
6	46-220234P3	PART	1	1	FAN TUBE AXIAL
10	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
11	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
12	2363753	PART	1	3	USB EXTENDER CABLE – 10 FT.
14	2249378	PART	1	1	VGA EXTENSION CABLE - 10 FT.
15	2249379	PART	1	1	POWER CORD EXTENSION (3.0 METERS)
17	2308522	PART	1		SVGA HDDB15M/M MONITOR CABLE – 15 FT.
18	2317143	PART	1	1	POWER CORD IEC60320 2M
22	2366244	PART	1	1	ADS FILTER ASSEMBLY 120V
30	2366436	PART	1	1	ADS BASE 100 FIBER SC TRANSCEIVER
33	2367224	PART	1	1	POWER CORD (IEC TO NEMA) 19 INCH
34	2367227	PART	1	1	POWER CORD (IEC TO NEMA) 6 INCH
35	2367225	PART	1	1	POWER CORD (IEC TO NEMA) 3 FT.
37	2221467	PART	1	1	POWER CORD (IEC 320FTO NEMA 15M) 1 FT.
38	2222961	PART	1	1	EAGLE ADS FAN CORD
40	46-276217P3	PART	1	6	FERRITE BEADS/FILTERS
41	2370391	PART	1	1	POWER CORD (IEC TO NEMA) 6 FT

1-20-4 ADS WORKSTATION (240 VAC) 2363509 REV 4

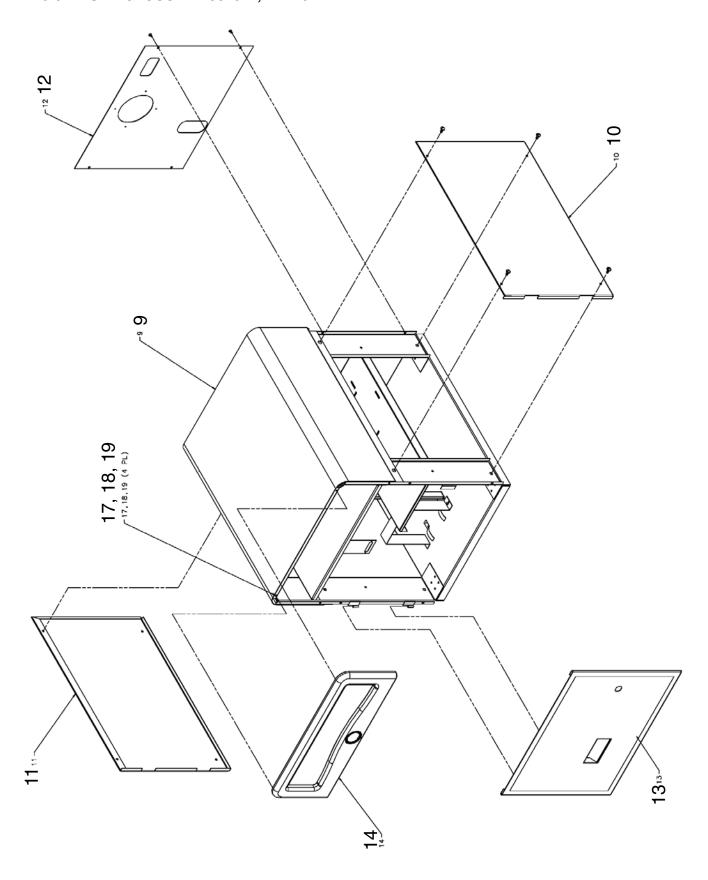
<u>Item</u>	Part Number	<u>Name</u>	FRU	Quantity	Description (Remarks)
1	2362641	PART	Ν	1	ADS ENCLOSURE (see Sec. 1-20-6)
2	2362280	PART	1	4	CASTER ECONO-LITE
3	2221460-2	PART	1	1	EAGLE UPS 240 VAC (see Sec. 1-22)
4	2355051	PART	1	1	GIPETO ADS WORKSTATION (see Sec. 1-23)
5	2245794	PART	1	1	GLOBAL MODEM KIT
6	2127701	PART	1	1	FAN AC ALL METAL AIR IN OVER STRUTS
10	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
11	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
12	2363753	PART	1	3	USB EXTENDER CABLE – 10 FT.
14	2249378	PART	1	1	VGA EXTENSION CABLE - 10 FT.
15	2249379	PART	1	1	POWER CORD EXTENSION (3.0 METERS)
17	2308522	PART	1		SVGA HDDB15M/M MONITOR CABLE – 15 FT.
18	2317143	PART	1	1	POWER CORD IEC60320 2M
22	2366244-2	PART	1	1	ADS FILTER ASSEMBLY 240V
30	2366436	PART	1	1	ADS BASE 100 FIBER SC TRANSCEIVER
33	2221466	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 0.5 M
34	2367228	PART	1	1	POWER CORD (IEC BOTH ENDS) 6 INCH
35	2367226	PART	1	1	POWER CORD (IEC BOTH ENDS) 3 FT.
36	2221466-3	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 1 FT.
37	2221466-3	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 1 FT.
38	2222961	PART	1	1	EAGLE ADS FAN CORD
40	46-276217P3	PART	1	6	FERRITE BEADS/FILTERS
41	2221466–2	PART	1	1	POWER CORD (IEC 320 BOTH ENDS)

1-20-5 ADS ASSEMBLY - CABLE IDENTIFICATION (SunBlade 150)



DIRECTION 2219417-100

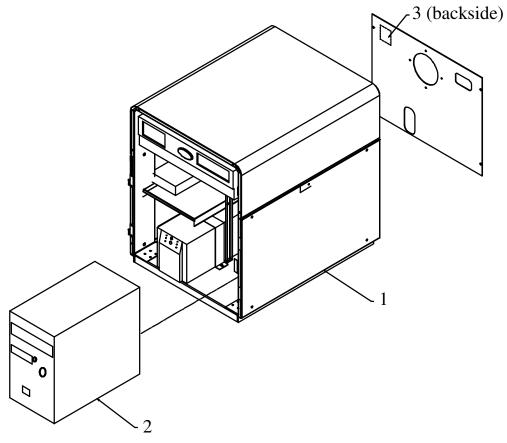
1-20-6 ADS ENCLOSURE 2362641, REV 0



ADS ENCLOSURE 2362641, REV 0

ltem	Part Number	Name	FRU	Quantity	Description (Remarks)
9	2362095	PART	1	1	ADS TOP COVER ASSEMBLY
10	2363734	PART	1	1	ADS RIGHT COVER ASSEMBLY
11	2363732	PART	1	1	ADS LEFT COVER ASSEMBLY
12	2363735	PART	1	1	ADS REAR COVER ASSEMBLY
13	2362264	PART	1	1	ADS DOOR
14	2366420	PART	1	1	ADS BEZEL ASSEMBLY

1-21 ADS 2405433, REV 2 (120VAC) / 2405434, REV 2 (240VAC) with DIE PC option



ADS WORKSTATION (120v) 2405433 (with DIE PC option)

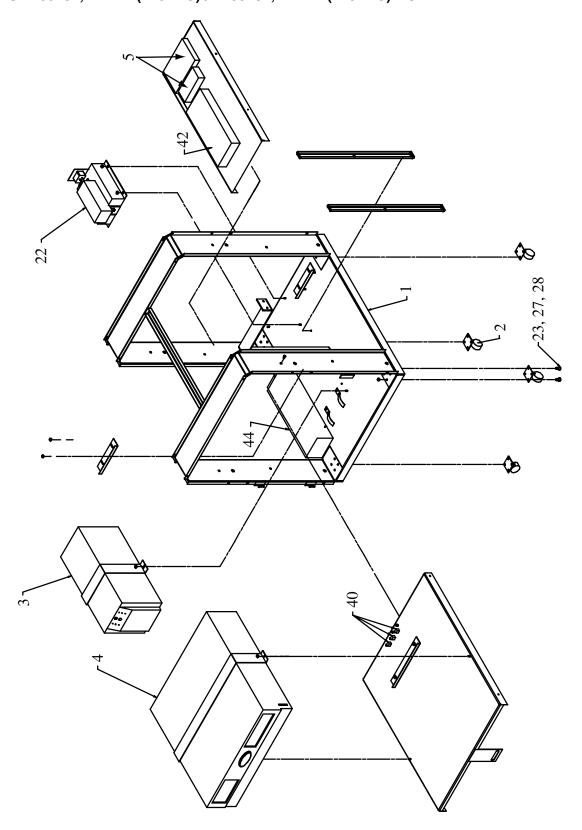
Item	Part Number	Name	FRU	Quantity	Description (Remarks)
1	2405431	PART	N	1	COTELLO ASSEMBLY 120V (see Sec. 1-21-1)
2	2405295	PART	1	1	COTELLO PC
3	46-302200P7	PART	N	1	SERIAL# / MODEL #
*	2221466	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 0.5 M
*	2215028-8	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45)
*	2383856-2	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45) [this is
					an alternate part number for 2215028-8]

ADS WORKSTATION (220v) 2405434 (with DIE PC option)

<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
1	2405432	PART	Ν	1	COTELLO ASSEMBLY 220V (see Sec. 1-21-1)
2	2405295	PART	1	1	COTELLO PC
3	46-302200P7	PART	Ν	1	SERIAL# / MODEL #
*	2221466	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 0.5 M
*	2215028-8	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45)
*	2383856-2	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45) [this is
					an alternate part number for 2215028-8]

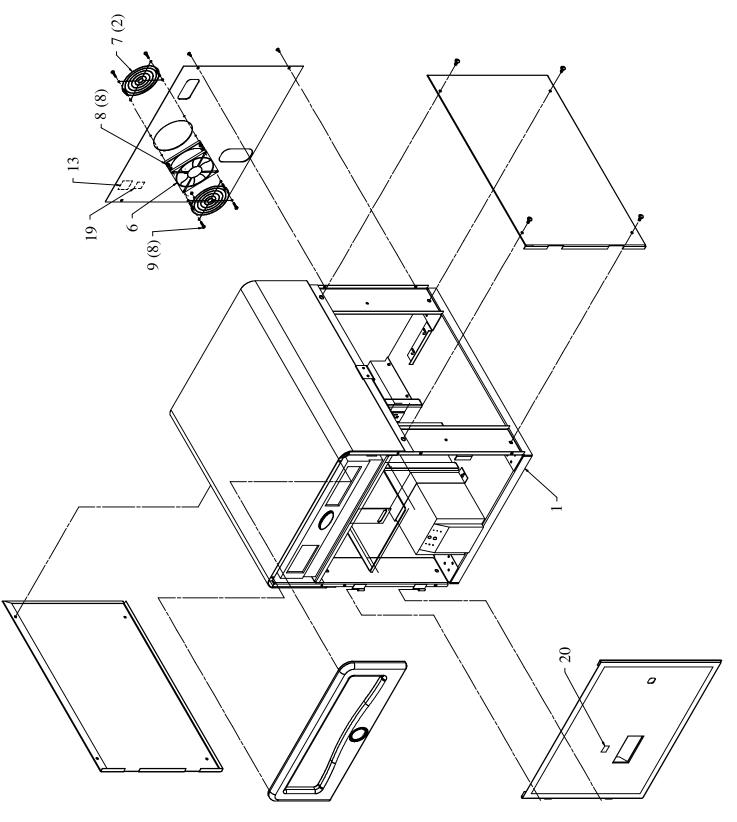
DIRECTION 2219417-100

1-21-1 ADS 2405431, REV 1 (120VAC) / 2405432, REV 1 (240VAC) BODY DETAIL



1-21-2 ADS 2405431, REV 1 (120VAC) / 2405432, REV 1 (240VAC) FAN DETAIL

2405431ADW, Sheet 2, Rev 0



1-21-3 ADS WORKSTATION (120 VAC) 2405431, REV 1

Note: Refer to the diagram on the following page for help with cable identification.

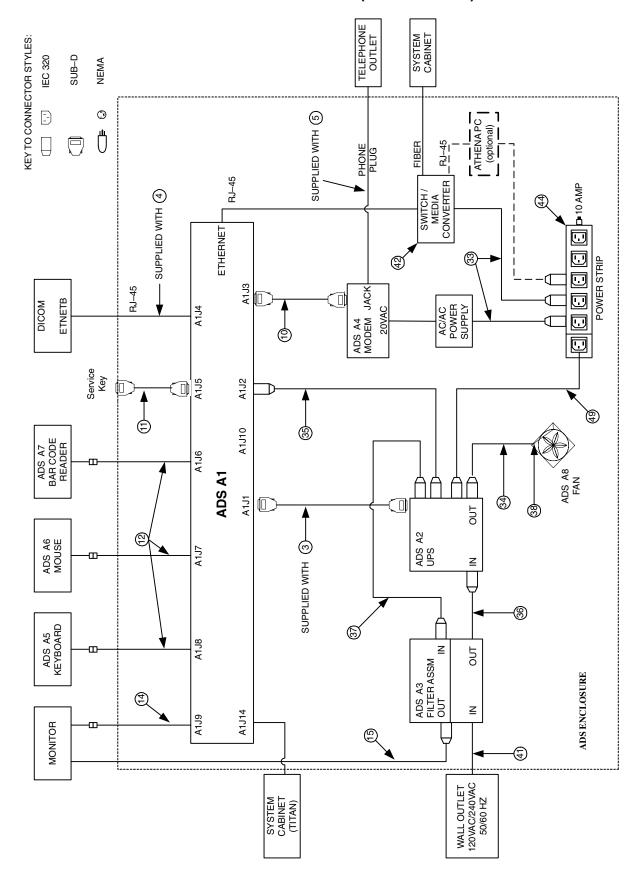
<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
1	2405719	PART	Ν	1	ADS COTELLO ENCLOSURE (see Sec. 1-21-6)
2	2362280	PART	1	4	CASTER ECONO-LITE
3	2221460	PART	1	1	EAGLE UPS 120 VAC (see Sec. 1-22)
4	2405296	PART	1	1	COTELLO ADS WORKSTATION (see Sec. 1-23)
5	2245794	PART	1	1	GLOBAL MODEM KIT
6	46-220234P3	PART	1	1	FAN TUBE AXIAL
10	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
11	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
12	2363753	PART	1	3	USB EXTENDER CABLE – 10 FT.
14	2249378	PART	1	1	VGA EXTENSION CABLE - 10 FT.
15	2249379	PART	1	1	POWER CORD EXTENSION (3.0 METERS)
17	2308522	PART	1		SVGA HDDB15M/M MONITOR CABLE – 15 FT.
18	2317143	PART	1	1	POWER CORD IEC60320 2M
22	2366244	PART	1	1	ADS FILTER ASSEMBLY 120V
33	2221466	PART	1	1	POWER CORD (IEC TO NEMA) 19 INCH
34	2367227	PART	1	1	POWER CORD (IEC TO NEMA) 6 INCH
35	2367225	PART	1	1	POWER CORD (IEC TO NEMA) 3 FT.
37	2221467	PART	1	1	POWER CORD (IEC 320FTO NEMA 15M) 1 FT.
38	2222961	PART	1	1	EAGLE ADS FAN CORD
40	46-276217P3	PART	1	6	FERRITE BEADS/FILTERS
41	2370391	PART	1	1	POWER CORD (IEC TO NEMA) 6 FT
42	2406312	PART	1	1	ETHERNET SWITCH
44	2406313	PART	1	1	TRIPP LITE POWER STRIP
45	2215028-8	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45)
*	2383856–2	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45) [this is
49	2221467	PART	1	1	an alternate part number for 2215028–8] POWER CORD (IEC 320 TO NEMA 15M) 1 FT

1-21-4 ADS WORKSTATION (240 VAC) 2405432, REV 1

Note: Refer to the diagram on the following page for help with cable identification.

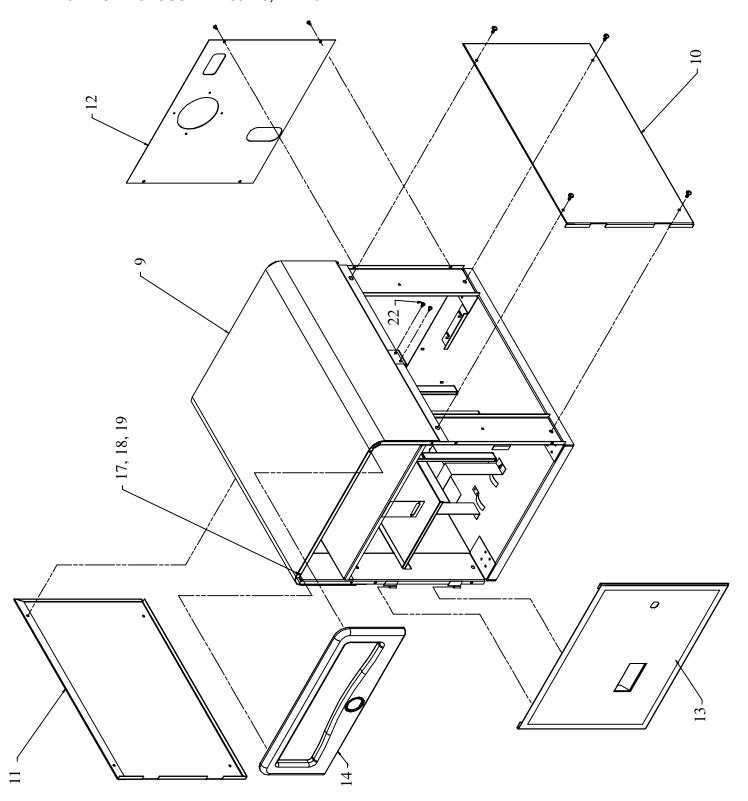
<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
1	2405719	PART	Ν	1	ADS COTELLO ENCLOSURE (see Sec. 1-21-6)
2	2362280	PART	1	4	CASTER ECONO-LITE
3	2221460-2	PART	1	1	EAGLE UPS 240 VAC (see Sec. 1-22)
4	2405296	PART	1	1	COTELLO ADS WORKSTATION (see Sec. 1-23)
5	2245794	PART	1	1	GLOBAL MODEM KIT
6	2127701	PART	1	1	FAN AC ALL METAL AIR IN OVER STRUTS
10	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
11	2224842	PART	1	1	HARDLOCK SERIAL CABLE 25DM TO 9DF
12	2363753	PART	1	3	USB EXTENDER CABLE – 10 FT.
14	2249378	PART	1	1	VGA EXTENSION CABLE - 10 FT.
15	2249379	PART	1	1	POWER CORD EXTENSION (3.0 METERS)
17	2308522	PART	1		SVGA HDDB15M/M MONITOR CABLE – 15 FT.
18	2317143	PART	1	1	POWER CORD IEC60320 2M
22	2366244-2	PART	1	1	ADS FILTER ASSEMBLY 240V
33	2221466	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 0.5 M
34	2367228	PART	1	1	POWER CORD (IEC BOTH ENDS) 6 INCH
35	2367226	PART	1	1	POWER CORD (IEC BOTH ENDS) 3 FT.
36	2221466-3	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 1 FT.
37	2221466-3	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 1 FT.
38	2222961	PART	1	1	EAGLE ADS FAN CORD
40	46-276217P3	PART	1	6	FERRITE BEADS/FILTERS
41	2221466–2	PART	1	1	POWER CORD (IEC 320 BOTH ENDS)
42	2406312	PART	1	1	ETHERNET SWITCH
44	2406313	PART	1	1	TRIPP LITE POWER STRIP
45	2215028-8	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45)
*	2383856–2	PART	1	1	UTP CAT 5 PATCH CORD CABLE (RJ45) [this is an alternate part number for 2215028–8]
49	2221466–3	PART	1	1	POWER CORD (IEC 320 BOTH ENDS) 1 FT

1-21-5 ADS ASSEMBLY - CABLE IDENTIFICATION (SunBlade 150)



DIRECTION 2219417-100

1-21-6 ADS ENCLOSURE 2405719, REV 0



DIRECTION 2219417-100

ADS ENCLOSURE 2405719

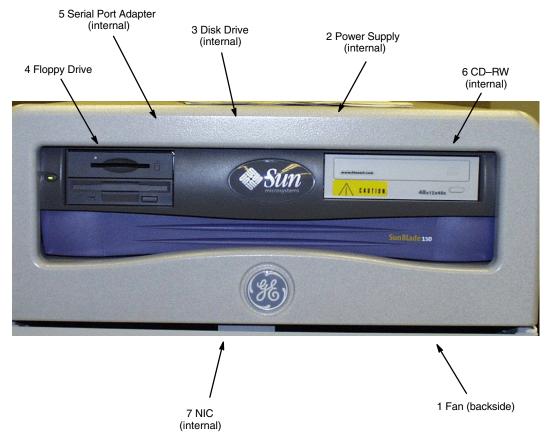
<u>Item</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
9	2406320	PART	1	1	COTELLO TOP COVER ASSEMBLY
10	2363734	PART	1	1	ADS RIGHT COVER ASSEMBLY
11	2363732	PART	1	1	ADS LEFT COVER ASSEMBLY
12	2363735	PART	1	1	ADS REAR COVER ASSEMBLY
13	2362264	PART	1	1	ADS DOOR
14	2366420	PART	1	1	ADS BEZEL ASSEMBLY

1-22 UPS, 2221460 REV 0 (120VAC), UPS, 2221460-2 REV 0 (240VAC)



Item	Designator	FRU	Part Number	Description (Remarks)	
1	BATTERY	1	2240180	UPS BATTERY (NOT SHOWN)	

1-23 ADS WORKSTATION 2355051 REV 1, 2405296 REV 0



ADS WORKSTATION 2355051 REV 1, 2405296 REV 0

<u>Item</u>	Designator	FRU	Part Number	Description (Remarks)
	_			
1	FAN	1	2356689	ADS SUNBLADE 150 FAN
2	PWR SUPPLY	1	2356690	ADS SUNBLADE 150 250W POWER SUPPLY
3	DISK DR	1	2405297	ADS SUNBLADE 150 80 GB INTERNAL HARD DISK (see Note 1)
	DISK DR	1	2356691	ADS SUNBLADE 150 40 GB INTERNAL HARD DISK (see Note 2)
4	FLOPPY DR	1	2356697	ADS SUNBLADE 150 INTERNAL FLOPPY DRIVE
5	ADAPTER	1	2232092	2X SERIAL PORT ADAPTER
6	CD-RW	1	2356692	ADS SUNBLADE 150 INTERNAL CD-RW
7	NIC	1	2360061	FIBER NETWORK CARD

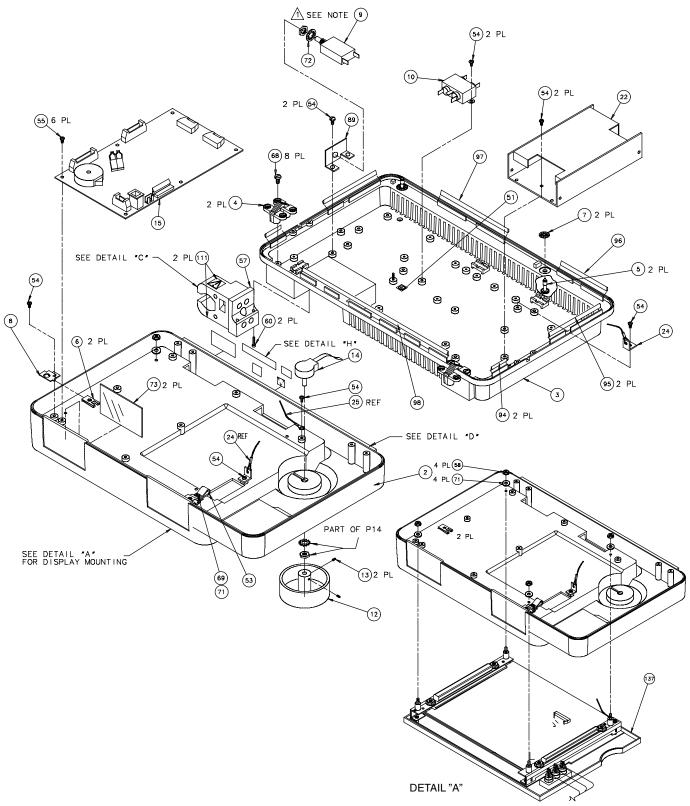
NOTE 1: Disk drive part number 2405297 (80GB) is used with ADS WorkStation 2405296.

- The SUN workstation contains 2 disk drives. When replacing disk drives, do not mix disk drive sizes (i.e. one 80GB drive with one 40GB drive).
- Replacing the two 80GB drives with two 40GB drives is not recommended.

NOTE 2: Disk drive part number 2356691 (40GB) is used with ADS WorkStation 2355051.

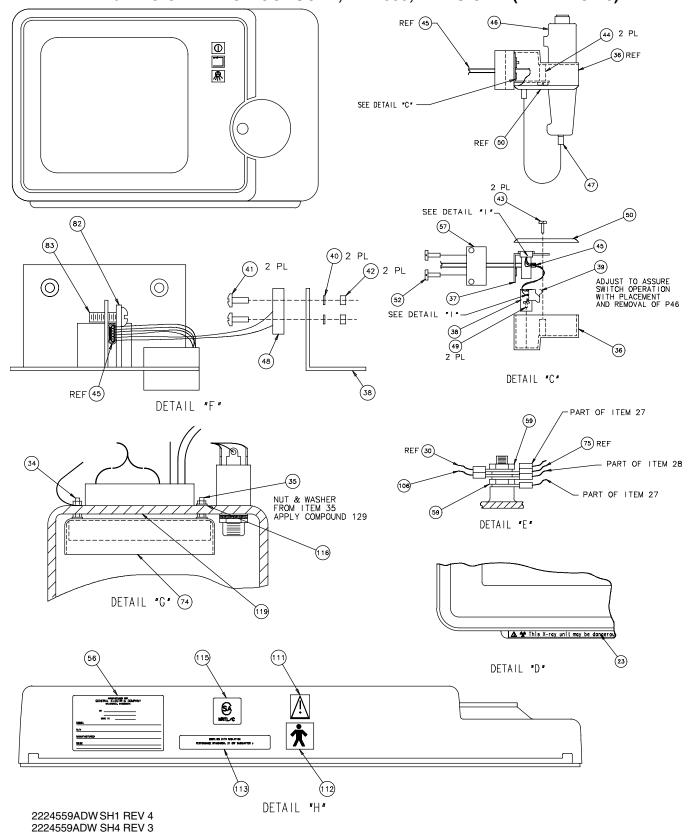
- The SUN workstation contains 2 disk drives. When replacing disk drives, do not mix disk drive sizes (i.e. one 80GB drive with one 40GB drive).
- If two 80GB drives are used to replace two 40GB drives, ADS software must be upgraded to version 28.2 (or higher).
- NOTE 3: If ADS WorkStation 2355051 is replaced with ADS WorkStation 2405296, software also needs to be upgraded. Order and install system software kit 2360864–9 (XQ/i System Software Collector).

1-24 ADVANTX EL / EMC OPERATOR CONSOLE, 2224559, REVISION 1 (PART 1 OF 3)

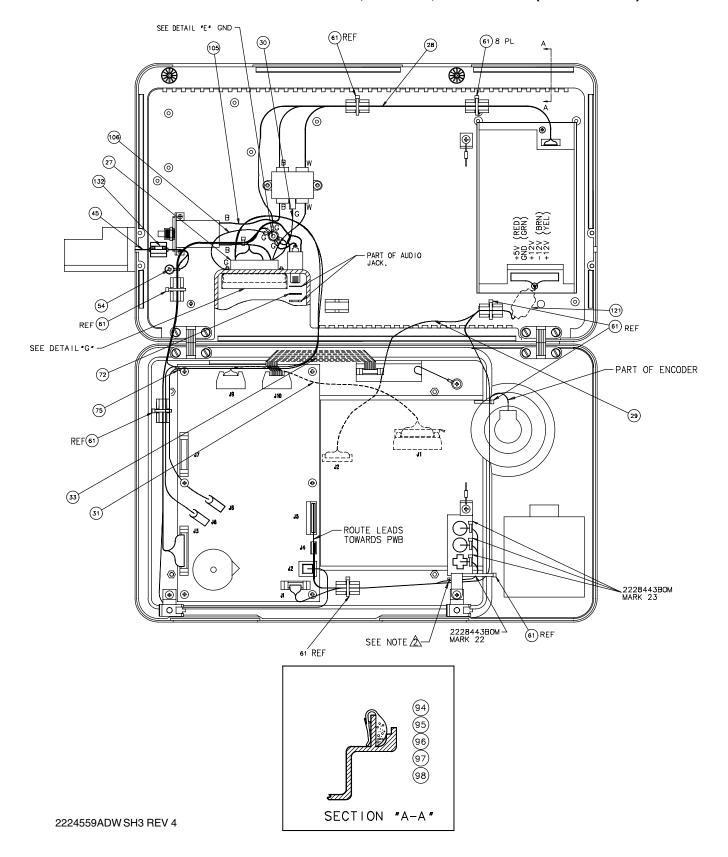


DIRECTION 2219417-100

ADVANTX EL / EMC OPERATOR CONSOLE, 2224559, REVISION 1 (PART 2 OF 3)



ADVANTX EL / EMC OPERATOR CONSOLE, 2224559, REVISION 1 (PART 3 OF 3)



ADVANTX EL / EMC OPERATOR CONSOLE, 2224559

<u>ltem</u>	Part Number N	Name FRU	Q	uantity	Description (Remarks)
				-	. , ,
14	46-276343P1	COMBINATIONA	1	1	TWO CHANNEL OPTICAL ENCODER.
15	2106682-2	CIRCUIT BD	1	1	ADVANTX E CONSOLE CONTROL PWA (EL)
22	2109380	SW PWR SUP	1	1	55W 4-OUTPUT SWITCHING POWER SUPPLY
47	46-315241P2	WIRE AND CAB	1	1	4-CONDUCTOR COIL CORD W/ MOD. PLUGS.
137	2228443	FRONT PANEL	1	1	TOUCH PANEL AND DISPLAY ASSEMBLY

Note: Console 2224559 (catalog number A8010LW) is better at meeting the EMC compliance specifications than the 2183000 (catalog number A8010LT) version of the Advantx–E console. Conductive gaskets, tape and paint have been added along with other minor modifications.

1-25 MISCELLANEOUS

1-25-1 ADS BAR CODE READER KIT 2399877 (HHP IMAGETEAM 3800/3900)

USED WITH THE SUNBLADE 150 WORKSTATION.



KIT 2399877 CONTAINING USB BAR CODE READER, 2 CABLES, USER'S GUIDE AND STAND IS ORDERABLE AS A FRU 1.

DIRECTION 2219417-100

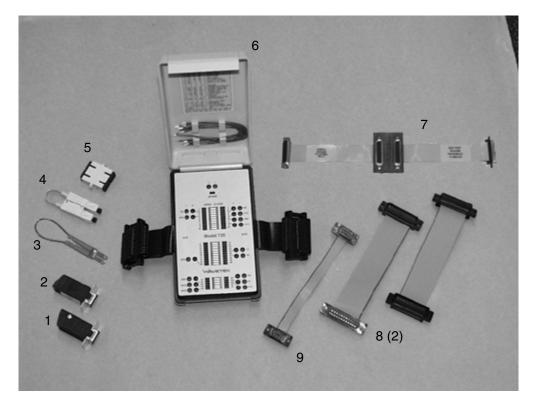
1-25-2 ADS BAR CODE READER KIT 2239261

USED WITH THE SUN U10 WORKSTATION.



KIT 2239261 CONTAINING BAR CODE READER, KEYBOARD WEDGE, 2 CABLES, AND 3 FERRITE BEADS IS ORDERABLE AS A FRU 1.

1-25-3 LOOPBACK KIT FOR REV XQ/i, 2252056

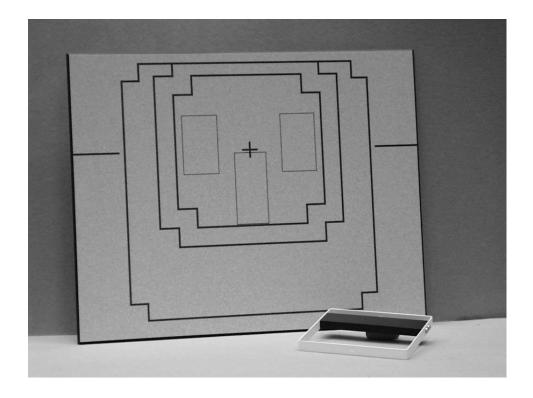


- 1. **2251644–2** This is a 9–pin female loopback connector. Pins jumpered together are 2–3, 1–4–6, 7–8–9. This is used during the first half of the AWS–UPS Communication diagnostic, and IDC–Conditioner Communication diagnostic.
- 2. **2251644** This is a 9-pin female loopback connector, labeled UPS. Pins jumpered together are 1–2. This is used during the second half of the AWS UPS diagnostic, connected to the end of the cable.
- 3. **2350524** This is an optical loopback connector, used during the IDC–Detector Communications diagnostics (used on the A3 and A4 Dione IDC only).
- 4. **2256701** This is an optical loopback connector, used during the IDC–Detector Communications diagnostic.
- 5. **2231528** This is an optical gender adapter, used during portions of the IDC–Detector Communications diagnostic.
- 6. **2250366** This is an old–style (obsolete) 25–pin breakout box, used during the Detector Power Supply Troubleshooting procedure.
- 7. **2356751** This is a service cable assembly (replacement for the obsolete 2250366 25–pin breakout box), used during the Detector Power Supply Troubleshooting procedure.
- 8. **2250645** These are 25–pin female–male ribbon cables, used as extension cables during the Detector Power Supply Troubleshooting procedure.
- 9. **2256929** This is a 9-pin male-male ribbon cable, to be used as a gender changer during the AWS-UPS Communication diagnostic, and the IDC-Conditioner Communication diagnostic.

KIT 2252056 CONTAINING ALL THE PIECES SHOWN ABOVE IS ORDERABLE AS A FRU 2.

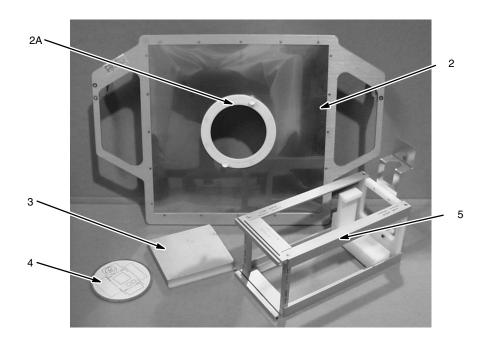
DIRECTION 2219417-100

1-25-4 ASYMMETRIC COLLIMATION OPTION, 2266311 (B1000KD)



KIT 2266311 CONTAINING THE FRAME, FIXED BLADE, PATIENT BARRIER AND HARDWARE IS ORDERABLE AS A FRU 2.

1-25-5 QAP KIT 2222543



<u>ltem</u>	Part Number	Name	FRU	Quantity	Description (Remarks)
				-	,
2	2220515	QAP CARRIER	1	1	EAGLE1 PHANTOM CARRIER
2A	2239019	CLAMP	2	1	RETAINING RING-PHANTOM CARRIER
					(PART OF ITEM 2)
3	2222354	PHANTOM	1	1	EAGLE FLAT FIELD PHANTOM
4	2220170	QAP PHANTOM	1	1	PHANTOM ASSEMBLY FOR THE QAP TOOL
5	2222557	FIXTURE	1	1	PROBE HOLDER FOR EAGLE 1

1-25-6 XQ/i Documentation Set (A7998KR)

<u>ltem</u>	Part Number	Description (Remarks)
1 2 3 4 5	2212800-100 2219413-100 2219414-100 2219415-100 2219416-100	DIGITAL RADIOGRAPHIC IMAGING SYSTEM OPERATOR MANUAL REVOLUTION XQ/i SYSTEM PRE-INSTALLATION AND SPECIFICATIONS MAN. REVOLUTION XQ/i SYSTEM MIS CHARTS REVOLUTION XQ/i SYSTEM INSTALLATION REVOLUTION XQ/i SYSTEM SCHEMATICS
6 12 13 14 15	2219417-100 2165121-100 2165122-100 2165123-100 2246837-100	REVOLUTION XQ/i SYSTEM RENEWAL PARTS SCPU V2 CENTRAL LISTINGS SCPU V2 RENEWAL PARTS SCPU V2 SCHEMATICS REVOLUTION XQ/i SYSTEM SYSTEM INTERCONNECTS
16 17 18 19 20	2247149-100 2392077-100 2245144-200 2247724-100 2216876-100	XQ/i ACQUISITION WORKSTATION CONFORMANCE STATEMENT FOR DICOM V3.0 SUN BLADE 150 SM XQ/i DIGITAL X-RAY OPERATOR MANUAL REVOLUTION XQ/i SYSTEM PLANNED MAINTENANCE REVOLUTION XQ/I SYSTEM USER CONFIGURATION AND CALIBRATION
21 24 25 26 27	2270268-100 2262501-100 2265208-100 2212800-101 2212800-106	ADVANTX-E RAD PROTOCOLS FOR REVOLUTION XQ/I PRE-INSTALLATION CHECKLIST FOR REVOLUTION XQ/I SYSTEM REVOLUTION XQ/I QUICKGUIDE DIGITAL RAD WALLSTAND SYSTEM OPERATOR MANUAL (FRENCH) DIGITAL RAD WALLSTAND SYSTEM OPERATOR MANUAL (SPANISH)
28 29 30 31 32	2212800-108 2212800-111 2212800-127 2245144-201 2245144-206	DIGITAL RAD WALLSTAND SYSTEM OPERATOR MANUAL (GERMAN) DIGITAL RAD WALLSTAND SYSTEM OPERATOR MANUAL (ITALIAN) DIGITAL RAD WALLSTAND SYSTEM OPERATOR MANUAL (PORTUGUESE) XQ/I DIGITAL X-RAY OPERATOR MANUAL CDROM (FRENCH) XQ/I DIGITAL X-RAY OPERATOR MANUAL CDROM (SPANISH)
33 34 35 36	2245144-208 2245144-211 2245144-227 2245144-140	XQ/I DIGITAL X-RAY OPERATOR MANUAL CDROM (GERMAN) XQ/I DIGITAL X-RAY OPERATOR MANUAL CDROM (ITALIAN) XQ/I DIGITAL X-RAY OPERATOR MANUAL CDROM (PORTUGUESE) XQ/I DIGITAL X-RAY OPERATOR MANUAL (JAPANESE)

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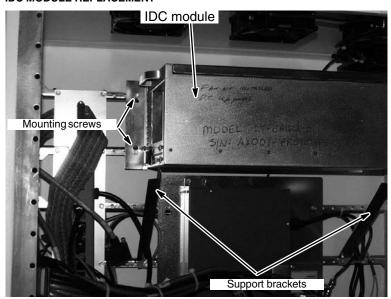
CHAPTER 2 - DISASSEMBLY/REASSEMBLY

SECTION 1 SYSTEM CABINET PROCEDURES

1-1 IDC Replacement

- [] 1. Remove power from the systems cabinet.
- [] 2. Disconnect all 6 cables going to the IDC.
- [] 3. Remove the mounting screws that attach the support bracket to the lower corners of the IDC.
- [] 4. Remove the lower mounting screw on each side of the IDC module.
- [] 5. Loosen the upper mounting screw on each side of the IDC module.
- [] 6. Lift the IDC over the 2 upper mounting screws and remove it from the System cabinet.

ILLUSTRATION 2-1 IDC MODULE REPLACEMENT



- [] 7. Lift the new IDC module into position and slide over the top two mounting screws.
- [] 8. Install the lower mounting screw on each side of the IDC module.
- [] 9. Install the mounting screws that attach the support bracket to the lower corners of the IDC.
- [] 10. Tighten all mounting screws.

Note: Failure to disconnect the fiber optic cable will cause FFDM code to be downloaded to the detector thus requiring a reload of the detector flash memory.

[] 11. Connect all cables, **except the fiber optic cable**, going to the IDC.

- [] 12. Apply power to the systems cabinet.
- [] 13. Verify that the ADS-IDC communication is functioning by "pinging" the IDC from the AWS.

Note: When doing the Load from Cold as part of the IDC replacement, one additional step is required. After the IDC software is loaded and the CD is removed but prior to re–booting the system, the fiber cable must be connected.

- [] 14. Perform an IDC software Load from Cold with the exception described in the preceding note. Refer to Appendix B in the Calibration direction.
- [] 15. Connect the fiber optic cable.
- [] 16. Reboot the system.

1-2 PDU Replacement

[] 1. When installing the Online Power Systems PDU in the XQ/i system cabinet, make sure that the interlock jumper plug for J5 connector (12–pin Mate–N–Loc) has a shorting jumper between pins 1 & 2. This jumper is supplied with the Online Power Systems PDU. See Illustration 2–2.





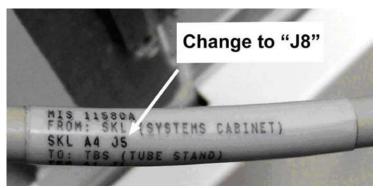
[] 2. In the XQ/i system cabinet, connect cable GE# 2216137 (MIS# 11580A) to connector J8 on the Online Power Systems PDU instead of J5 (as specified on the cable label). See Illustration 2–3.

ILLUSTRATION 2-3 MIS 11580A



[] 3. Use a non-erasable marker to change the GE# 2216137 cable label from J5 to J8 on the system cabinet end of the cable. See Illustration 2–4.

ILLUSTRATION 2–4
CHANGE LABEL ON 2216137 CABLE



SECTION 2 AWS WORKSTATION PROCEDURES

2-1 SUN Computer Replacement

[]	1.	Remove power to the AWS Workstation.			
[]	2.	Remove the right side cover from the AWS Workstation.			
[]	3.	Disconnect all cables going to the SUN computer.			
[]	4.	Remove the 2 brackets from the top of the computer.			
[]	5.	Slide the computer out the front of the workstation.			
[]	6.	Slide the replacement computer into the workstation.			
[]	7.	Install the 2 brackets removed earlier.			
[]	8.	Re-connect the cables.			
[]	9.	Install the right side cover on the AWS Workstation.			
[]	10.	Apply power to the AWS Workstation.			
[]	11.	Perform an AWS Software Load from Cold as described in Appendix B of the Calibration direction.			

2-2 DIE Computer Replacement

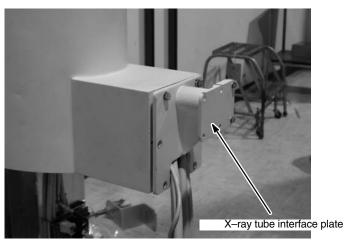
- 1. Remove power to the AWS Workstation.
- 2. Remove the right side cover from the AWS Workstation.
- 3. Disconnect all cables going to the DIE computer.
- 4. On the right side, remove the 2 screws holding the DIE computer retaining bracket to the top cover of the AWS Workstation.
- 5. Slide the computer out the front of the workstation.
- 6. Slide the replacement computer into the workstation.
- 7. Install the 2 screws removed earlier.
- 8. Re-connect the cables.
- 9. Install the right side cover on the AWS Workstation.
- 10. Apply power to the AWS Workstation.

SECTION 3 TUBE STAND PROCEDURES

3-1 Cable Replacement

- [] 1. Remove the trim covers from the tube stand, carriage arm, and tube.
- [] 2. Disconnect the cables going to the collimator and X–ray tube.
- [] 3. Remove the collimator and X-ray tube.
- [] 4. Remove the X-ray tube interface plate. See Illustration 2–5.

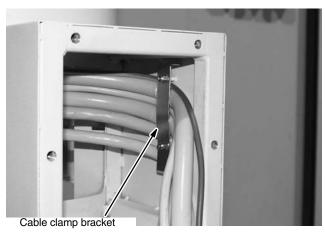
ILLUSTRATION 2-5
X-RAY TUBE INTERFACE PLATE



Note: Record orientation of cables through clamps and cable chain so they can be replaced in the same position.

[] 5. Remove the cable clamp bracket inside the carriage arm. See Illustration 2–6.

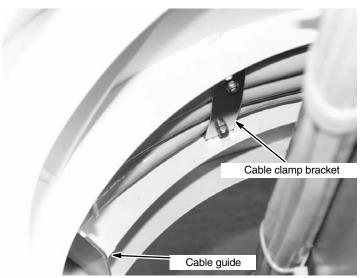
ILLUSTRATION 2-6
TUBE ARM CABLE CLAMP



[] 6. Bend the tang on the cable guide inside the carriage enough to allow the cable to slide out thru the opening. See Illustration 2–7.

[] 7. Remove the cable clamp bracket inside the carriage. See Illustration 2–7.





[] 8. Remove the small cable clamp located where the cables exit the carriage front cover. Clamp is secured with 2 flat head screws accessed from the rear of carriage. See Illustrations 2–8 and 2–9.

ILLUSTRATION 2-8
SMALL CABLE CLAMP AT REAR OF CARRIAGE

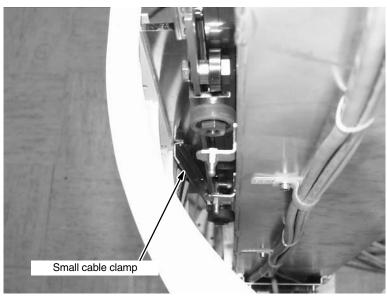
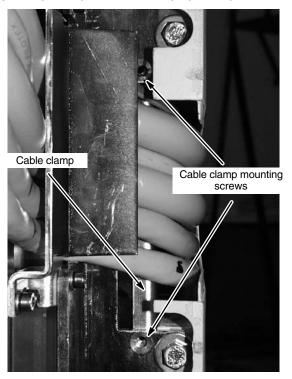


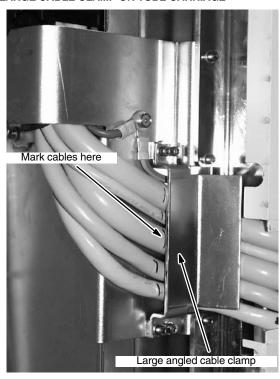
ILLUSTRATION 2-9 SMALL CABLE CLAMP AT REAR OF CARRIAGE



[] 9. Put a reference mark on all the cables where they are trapped under the clamp. For the cable being replaced, measure the length from the mark to the tube/collimator end and mark the new cable accordingly. See Illustration 2–10.

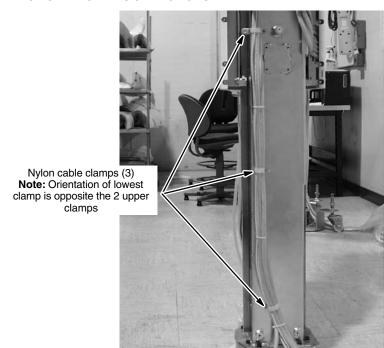
[] 10. Remove the large angled cable clamp. See Illustration 2–10.

ILLUSTRATION 2–10 LARGE CABLE CLAMP ON TUBE CARRIAGE



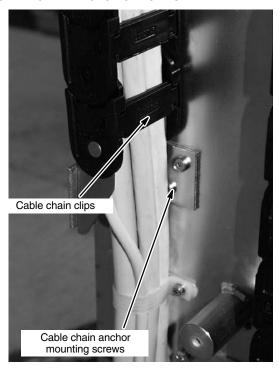
[] 11. Remove the 3 nylon cable clamps that secure the cables along the rear of the stand. See Illustration 2–11.

ILLUSTRATION 2–11 NYLON CABLE CLAMPS ON BACK OF STAND



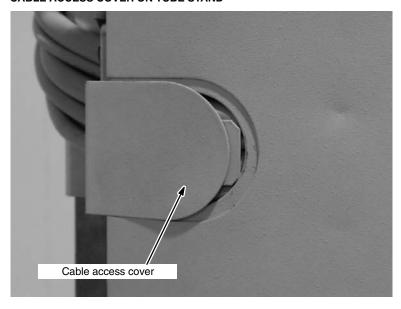
- [] 12. Remove the 2 flat head screws that secure the cable chain anchor. See Illustration 2–12.
- [] 13. Remove the clips that hold the cables in the cable chain. See Illustration 2–12.

ILLUSTRATION 2-12
CABLE CHAIN ANCHOR ON TUBE STAND



[] 14. Remove the cable access cover. See Illustration 2–13.

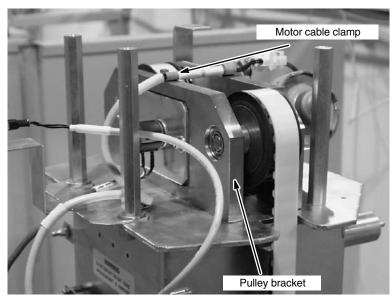
ILLUSTRATION 2-13
CABLE ACCESS COVER ON TUBE STAND



REV 12 DIRECTION 2219417-100 [] 15. Remove the cable to be replaced. [] 16. Feed new cable into the stand and position it in the proper place within the cable bundle. [] 17. Align all the marks on the cables with the large cable clamp and secure with four hex socket head screws. See Illustration 2-10. [] 18. Position cable where required and install the small clamp. See Illustrations 2–8 and 2–9. [] 19. Position cable where required and install the clamp in the carriage. See Illustration 2–7. [] 20. Position cable where required and return the tang on the cable guide to its original position. See Illustration 2-7. [] 21. Position cable where required and install the clamp in the carriage arm. See Illustration 2–6. [] 22. Install the interface plate, tube, and collimator. See Illustration 2–5. [] 23. Connect cables. [] 24. Route cable in cable chain and install retaining clips. See Illustration 2–12. [] 25. Install cable chain anchor. See Illustration 2–12. [] 26. Install 3 nylon cable clamps and any additional ty-raps as desired. See Illustration 2–11. [] 27. Install cable access cover and all trim covers. See Illustration 2–13. 3-2 Potentiometer Belt Replacement Refer to Illustrations 2-14 and 2-15 when performing the potentiometer belt replacement. [] 1. Remove power from the stand by turning off the power switch at the base of the stand. [] 2. Loosen the screws that secure the pot mounting plate.

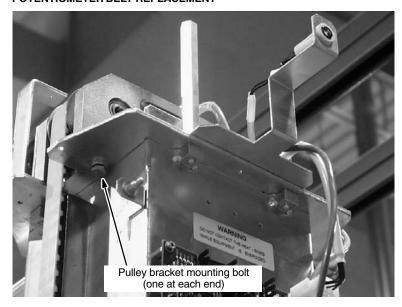
[] 3. Remove the screw that secures the motor cable clamp to the top of the pulley support bracket.





[] 4. Remove the 2 bolts that secure the pulley bracket.

ILLUSTRATION 2–15
POTENTIOMETER BELT REPLACEMENT



- [] 5. Slide the pulley bracket off the pulley bearings.
- [] 6. Install the new potentiometer belt. Do NOT put belt around pulley on pot.
- [] 7. Replace the pulley bracket. (2 bolts)
- [] 8. Replace the motor cable clamp.
- [] 9. Apply power to the stand.

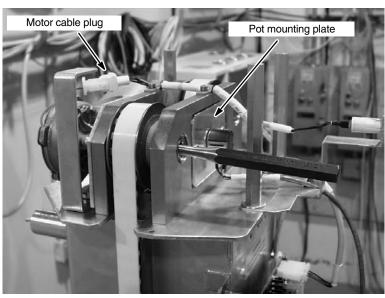
- [] 10. Adjust the potentiometer per the Re–adjustment Procedure for Offset/Gain Calibration described in calibration unit P305.
- [] 11. Perform calibration unit P305.

3-3 Vertical Drive Motor/Gear Box Replacement

Refer to Illustrations 2-16, 2-17, and 2-18 when performing the motor/gear box replacement.

- [] 1. Remove power from the stand by turning off the power switch at the base of the stand.
- [] 2. Insert the shipping bolt through the counterweight assembly to prevent the carriage from moving up or down.
- [] 3. Disconnect the motor at the white plug.

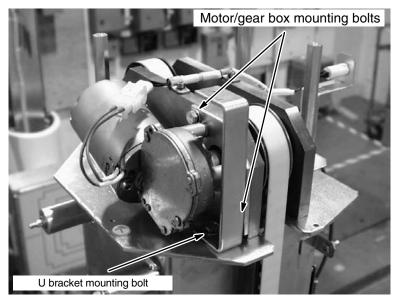
ILLUSTRATION 2-16
MOTOR/GEAR BOX REPLACEMENT



[] 4. Remove the bolt that secures the U bracket used to mount the top cover.

[] 5. Remove the 2 bolts that secure the motor/gear box to the pulley bracket.





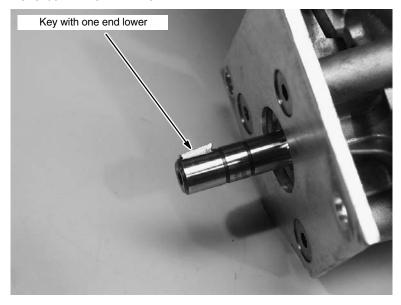
[] 6. Slide the motor/gear box assembly out of the pulley shaft.

Note: If necessary, use a punch to help drive the motor/gear box shaft out of the pulley shaft. If this is a temporary removal of the motor/gear box, be careful because this could cause the cover to pop off the gear box rendering it useless.

[] 7. Install the key in the motor/gear box shaft. The key should have the end entering the pulley shaft lower than the trailing edge.

Note: It is important that the shaft slide easily into the pulley shaft since forcing it can cause the shaft to push the cover off the gear box. If it does not slide easily, check the key height.

ILLUSTRATION 2-18 MOTOR/GEAR BOX REPLACEMENT



- [] 8. Secure the motor/gear box to the pulley bracket.
- [] 9. Replace the U bracket.
- [] 10. Connect the motor cable plug.
- [] 11. Remove the rod used to prevent carriage movement.
- [] 12. Apply power to the stand.

SECTION 4 RECEPTOR STAND PROCEDURES

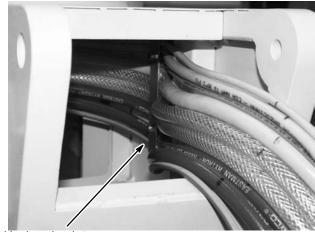
4-1 Cable Replacement

- [] 1. Remove the trim covers from the receptor stand, carriage arm, and detector assembly.
- [] 2. Disconnect the cables and hoses going to the detector and ion chamber.
- [] 3. Disconnect the detector leveling assembly.
- [] 4. Remove the rubber cable plug at the back of the detector housing.
- [] 5. Remove the detector, ion chamber, grid, and detector housing.

Note: Record orientation of cables through clamps and cable chain so they can be replaced in the same position.

[] 6. Remove the cable clamp bracket inside the carriage arm. See Illustration 2–19.

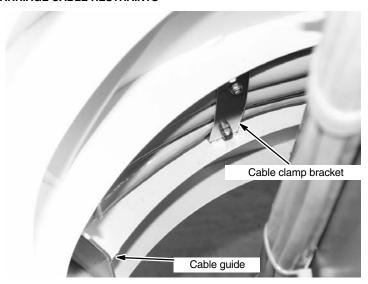
ILLUSTRATION 2-19 RECEPTOR ARM CABLE CLAMP



Cable clamp bracket

- [] 7. Bend the tang on the cable guide inside the carriage enough to allow the cable to slide out thru the opening.
- [] 8. Remove the cable clamp bracket inside the carriage.

ILLUSTRATION 2-20
CARRIAGE CABLE RESTRAINTS



[] 9. Remove the small cable clamp located where the cables exit the carriage front cover. Clamp is secured with 2 flat head screws accessed from the rear of carriage.

ILLUSTRATION 2-21 SMALL CABLE CLAMP AT REAR OF CARRIAGE

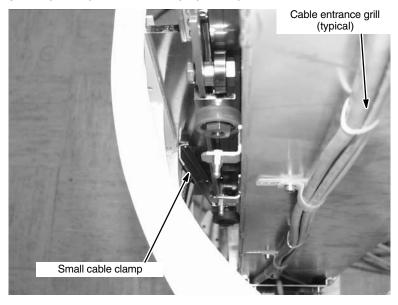
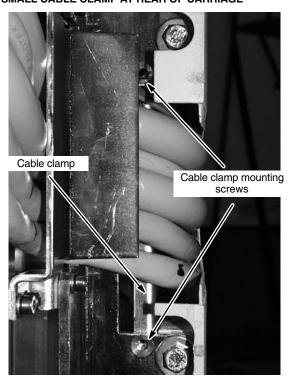
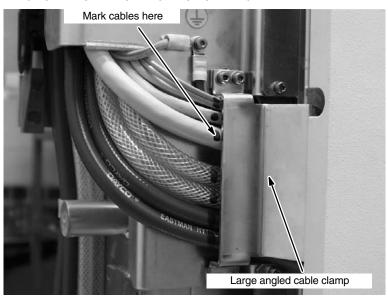


ILLUSTRATION 2-22 SMALL CABLE CLAMP AT REAR OF CARRIAGE



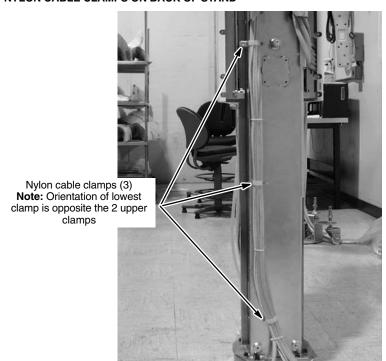
- [] 10. Put a reference mark on all the cables where they are trapped under the clamp. For the cable being replaced, measure the length from the mark to the tube/collimator end and mark the new cable accordingly.
- [] 11. Remove the large angled cable clamp.

ILLUSTRATION 2-23 LARGE CABLE CLAMP ON RECEPTOR CARRIAGE



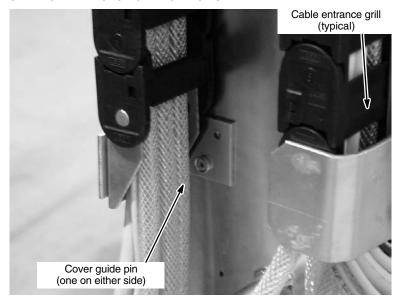
[] 12. Remove the 3 nylon cable clamps that secure the cables along the rear of the stand.

ILLUSTRATION 2–24 NYLON CABLE CLAMPS ON BACK OF STAND



- [] 13. Remove the 2 flat head screws that secure the cable chain anchor.
- [] 14. Remove the clips that hold the cables in the cable chain.

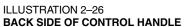
ILLUSTRATION 2–25 CABLE CHAIN ANCHOR ON RECEPTOR STAND

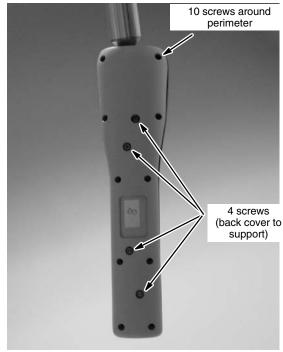


- [] 15. Remove the cable to be replaced.
- [] 16. Feed new cable into the stand and position it in the proper place within the cable bundle.
- [] 17. Align all the marks on the cables with the large cable clamp and secure with four hex socket head screws.
- [] 18. Orient cable where required and install the small clamp.
- [] 19. Orient cable where required and install the clamp in the carriage.
- [] 20. Orient cable where required and return the tang on the cable guide to its original position.
- [] 21. Orient cable where required and install the clamp in the carriage arm.
- [] 22. Install the interface plate, tube, and collimator.
- [] 23. Connect cables.
- [] 24. Route cable in cable chain and install retaining clips.
- [] 25. Install cable chain anchor.
- [] 26. Install 3 nylon cable clamps and any additional ty-raps as desired.
- [] 27. Install cable access cover and all trim covers.

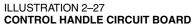
4-2 Control Handle Replacement

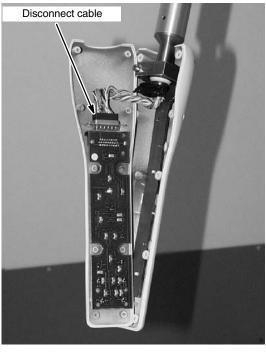
[] 1. Remove the 10 screws that secure the front of the handle. See Illustration 2–26.





[] 2. Disconnect the cable from the circuit board. See Illustration 2–27.





- [] 3. Remove the 4 screws that secure the back cover to the handle support. See Illustration 2–26.
- [] 4. Secure the new back cover to the handle support with 4 screws.
- [] 5. Twist the end of the cable to put several twists in the unjacketed leads. See Illustration 2–28.
- [] 6. Connect the cable to the circuit board without removing the twist put in previously.
- [] 7. Secure the front cover to the back cover with 10 screws.

ILLUSTRATION 2–28 CABLE PREP FOR CONTROL HANDLE



4-3 Detector Replacement

The RAD detector must have the cooling fluid removed prior to boxing the detector for shipment. This is necessary to ensure that the cooling fluid will not freeze and break the tubing. Additionally, the detector needs to be kept in a dry environment. Any fluid remaining in the tubing, over time adds humidity to the detector's environment as it is stored in the shipping container.

4-3-1 Tools

4-3-2

A syringe is supplied with every detector. This syringe is supplied with flexible tubing attached. Four quick disconnects, two of each gender, are also supplied.

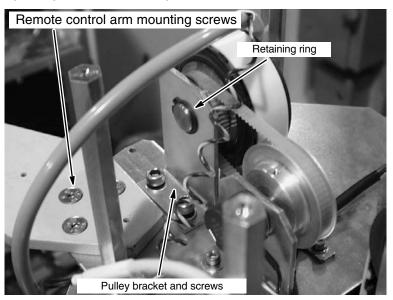
For the RAD detector the male quick disconnect will need to be inserted into the end of the flexible tubing making sure that the end of the quick disconnect that mates with the female quick disconnect on the detector is working properly.

Pr	OC	ed	ure
[]	1.	Remove system power.
[] :	2.	Remove trim covers and dis-assemble the detector housing.
[] ;	3.	Disconnect the ground, all electrical cables, and the cooling hoses from the detector using the quick disconnects.
[] ·	4.	Remove the detector from the system and lay it flat on a stable surface.
[]	5.	Locate the purging syringe. Insert the male quick disconnect (supplied) into the flexible tubing attached to the input port (along the longitudinal axis) of the syringe.
[]	6.	Locate a pail or bucket in which to catch the purged coolant and place the output tubing (out the side of the syringe) into it. 1 pint (0.5 liter) is sufficient size.
[]	7.	Connect the male quick disconnect to either female quick disconnect on the detector.
[]	8.	Open the other female quick disconnect on the detector by attaching the other male quick disconnect (supplied).
[]	9.	Pull back on the syringe. Coolant will be drawn from the detector and into the syringe.
[]	10.	Push the plunger on the syringe to expel the coolant into the pail.
[]	11.	Repeat steps 9 & 10 until no additional coolant is removed.
[]	12.	Disconnect the syringe and male quick disconnects from the detector tubing.
[]	13.	Properly dispose of the cooling fluid in the pail.
[]	14.	Wipe the detector dry.
[]	15.	Complete preparation of the detector by boxing it for shipment.
[]	16.	Install the replacement detector.
[]	17.	Connect the ground, all electrical cables, and the cooling hoses to the detector using the quick disconnects

[] 14. Perform calibration unit P305

REV 12 DIRECTION 2219417-100 [] 18. Re–assemble the detector housing and install trim covers. [] 19. Perform complete detector calibration. Bad pixel, gain and CF measurement. 4-4 **Potentiometer Belt Replacement** Refer to Illustration 2-29 when performing the potentiometer belt replacement. [] 1. Remove power from the stand by turning off the power switch at the base of the stand. [] 2. Disconnect the cable going from the remote control arm to the control board. [] 3. Remove the remote control arm. (3 bolts) [] 4. Loosen the screws that secure the pot bracket. [] 5. Remove the retainer ring that holds the pulley shaft to the pulley support bracket. [] 6. Remove the pulley support bracket. (2 bolts) [] 7. Slide the support bracket off the pulley shaft. [] 8. Install the new potentiometer belt. Do NOT put belt around pulley on pot. [] 9. Replace the pulley support bracket. (2 bolts) [] 10. Replace the retainer ring. [] 11. Replace the remote control arm. (3 bolts) [] 12. Apply power to the stand. [] 13. Adjust the potentiometer per the Re-adjustment Procedure for Offset/Gain Calibration described in calibration unit P305.

ILLUSTRATION 2-29 POTENTIOMETER BELT REPLACEMENT



REV 12

DIRECTION 2219417-100

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SECTION 5 COOLANT PROCEDURES

5-1 Kit Contents and Tools Needed

5-1-1 Special Tools & Test Equipment

Use standard Field Engineer toolkit.

5-1-2 Field Supplied Materials

None.

5-1-3 Furnished Materials

Item	QTY.	Part Number	Description
Funnel	1	2260360–16	
1 quart bottle of coolant	2	2352900	Replacement coolant
Rubber gloves	1	2260360–17	
Safety goggles	1	2260360–18	
Empty 1-gallon plastic bottle	1	2260360–19	Initial flush container
Service Hose	1	2260360–8	Male disconnect one end only
Service Hose	1	2260360–9	Female disconnect one-end only
Syringe Vacuum Kit	1	2270096	Coolant extraction
Flush Fluid 1 gallon distilled water	2	2353430–3	
Instructions			This document
Quick disconnect inline hose coupling female (included in syringe bag)	1	2209200-11	Spare
Quick disconnect inline hose coupling male (included in syringe bag)	1	2209200–12	Spare
Return Label	1	2353353–2	
Empty 2-Liter container	1	2260360–13	Coolant Return Container
Shipping box		2260360-14	Return coolant
Adapter Cord	2	2260360-15	Remote conditioner pwr
MSDS for Oakite fluid	1	2353650	Chemical data sheet
MSDS for new coolant	1	2357741	Chemical data sheet
Permanent Marker Pen	1	2260360–21	For connector labeling
Paper towel roll	1	2260360–23	

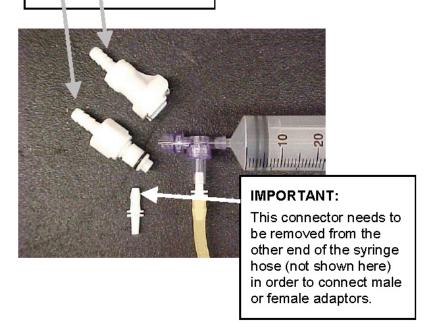
5-1-4 Syringe Kit

The following procedure requires use of provided syringe kit for coolant extraction. Parts provided:

- Syringe 60cc
- Flexible tubing
- Single directional valve coupling
- 1 Male hose adaptor
- 1 Female hose adaptor

ILLUSTRATION 2-30 SYRINGE KIT

Adaptors need to be switched when performing System vs Conditioner purge procedures



5-2 REVOLUTION XQ/i COOLANT EXCHANGE PROCEDURE

A CAUTION

Before proceeding, be sure of the following:

- You are wearing the safety goggles and rubber gloves included in the coolant kit, as the cooling fluid can cause irritation of the hands and eyes upon direct contact.
- You are wearing safety shoes, as the procedure involves removing cabinet covers.
- Adequate ventilation is provided.
- Use LOCKOUT TAGOUT procedures during all power down/up steps

5-2-1 XQ/i Wallstand Coolant Purge

This section describes how to remove the coolant from the system hoses, detector, and conditioner.

XQ/i Wallstand - Conditioner Flush

- [] 1. The purpose of this step is to flush any contaminants out of the conditioner that may have settled inside of it during operation. After the flush is complete, the coolant will be purged from the conditioner with a syringe.
- [] 2. Insert service hose (2260360–8) into coolant OUT connector on conditioner (Illustration 2–31). Place other end of service hose into collection bottle (2260360–13).

ILLUSTRATION 2-31
SERVICE HOSE CONNECTIONS



[] 3. Place paper towel over conditioner reservoir to protect from spills (Illustration 2–32).





[] 4. Turn power on to conditioner and pour in about 1/4 of a gallon (~1 Liter) of distilled water (2353430-3).

NOTICE

Potential for Equipment Damage

In order to provide power to the conditioner, the system will need to be turned back on. This will also apply power to the digital detector, which doesn't have any coolant flow to control temperature. To avoid detector problems, the system should be powered for no more than 10 minutes with no coolant flow.

[] 5. After pouring 1/4 gallon of water, wait for the "Check Fluid" status (ThermoTek conditioner) or the "Err 20, Low Liquid Level Alarm" status (SMC conditioner) to appear and then turn off the conditioner and turn off system power.

XQ/i Wallstand - Hose and Detector Purge

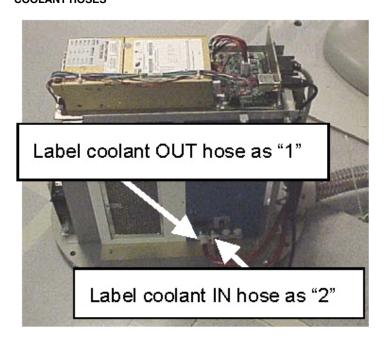
[] 1. Remove the screw holding the DSA cover and then lift the cover up to remove (Illustration 2–33).

ILLUSTRATION 2-33 COVER REMOVAL



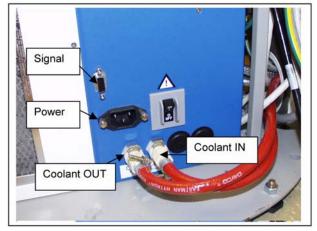
[] 2. Label coolant hose that is connected to conditioner OUT as "1" with marker provided (Illustration 2–34).

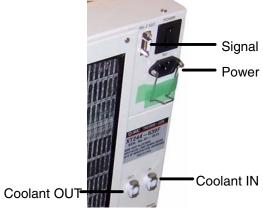
ILLUSTRATION 2-34 COOLANT HOSES



[] 3. Label coolant hose that is connected to conditioner IN as "2" (Illustration 2–35).

ILLUSTRATION 2-35 COOLANT CONNECTORS



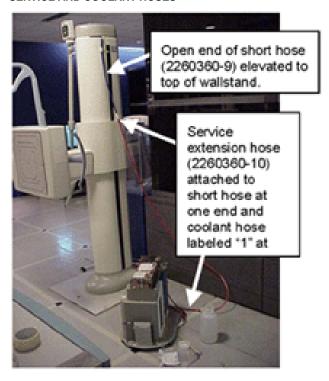


THERMOTEK CONDITIONER

SMC CONDITIONER

- [] 4. Disconnect coolant connectors.
- [] 5. Attach service hose (2260360-10) to coolant hose labeled as "1" (Illustration 2-36).

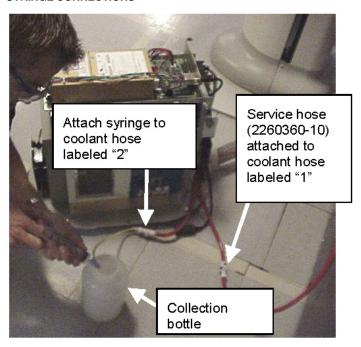
ILLUSTRATION 2-36 SERVICE AND COOLANT HOSES



- [] 6. Attach short hose (2260360–9) to end of service hose (2260360–10). Make sure to hold the open end of the short hose so that it is higher than the top of the wallstand to keep water from running out (Illustration 2–36).
- [] 7. Constrain the short hose so that it is higher than the wallstand.

[] 8. Attach female adapter to syringe and connect syringe to coolant hose labeled as "2" (Illustration 2–37).

ILLUSTRATION 2-37 SYRINGE CONNECTIONS

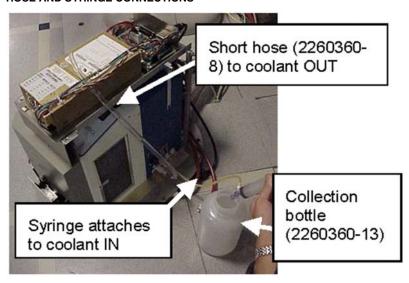


- [] 9. Syringe out the coolant from the hoses and place in collection bottle (2260360–13). The first few suction strokes with the syringe may be air, continue suction until all the coolant has been removed.
- [] 10. Once all the coolant has been removed, disconnect the short hose (2260360–9), service hose (2260360–10), and the syringe from hose connectors "1" and "2".

XQ/i Wallstand - Conditioner Purge

The purpose of this step is to remove the coolant from inside the conditioner using the provided syringe.

ILLUSTRATION 2–38 HOSE AND SYRINGE CONNECTIONS



- [] 11. Ensure cap on top of conditioner is tightly closed.
- [] 12. Attach short hose (2260360–8) to Coolant OUT connector of the conditioner.
- [] 13. Make sure open hose end (2260360–8) is held higher than the OUT connector to prevent coolant from leaking out.
- [] 14. Attach male adapter to syringe and connect syringe to coolant IN connector. Use syringe to remove coolant from conditioner.
- [] 15. Note: The first suction stroke with the syringe may be all air. Continue suction.

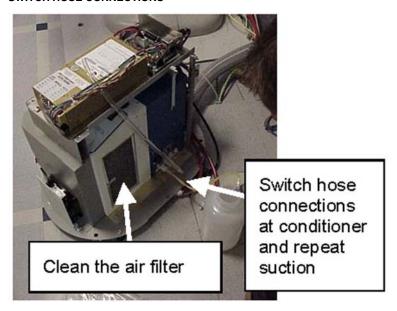
A CAUTION

Potential Environmental Hazard

Do not dispose of any coolant down the hospital drain.

- [] 16. Empty all coolant into collector bottle (2260360–13). Continue removing coolant with syringe until no more coolant can be removed. Refer to Illustration 2–38.
- [] 17. Switch hose connections as shown in Illustration 2–39 and repeat steps from Illustration 2–38 above.

ILLUSTRATION 2-39 SWITCH HOSE CONNECTIONS

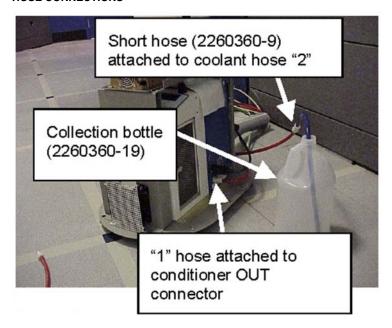


- [] 18. Clean the conditioner air filter:
 - For the ThermoTek conditioner, refer to the instructions at conditioner's rear.
 - For the SMC conditioner, perform the following steps:
 - >> Turn off the conditioner and remove the conditioner power cord.
 Remove the air filter from the conditioner.
 Use a vacuum cleaner to remove lint from the filter. Water should not be used to clean the filter due to the presence of iron in the frame of the filter.
 - >> Use compressed air to remove any remaining lint.
 - >> Use adhesive tape to remove any lint that the vacuum cleaner or compressed air failed to remove.
 - >> Install filter into conditioner, connect conditioner power cord and turn on the power switch
- [] 19. Collection bottle (2260360–13) will not be used to collect any additional coolant and can be closed at this time.

XQ/i Wallstand - Full System Flush

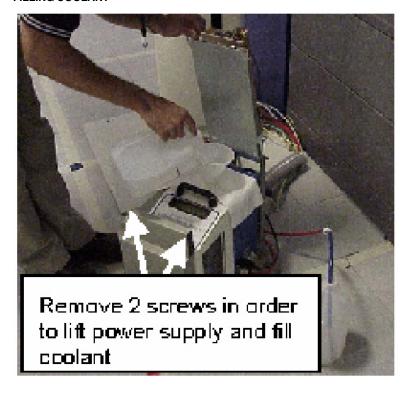
[] 1. The purpose of this procedure is to use the conditioner to pump the remaining distilled water (approximately 1 3/4 gallons) through the entire coolant system and into flush collection bottles. Refer to Illustrations 2–40 and 2–41.

ILLUSTRATION 2-40 HOSE CONNECTIONS



- [] 1. Connect coolant hose "1" to the conditioner OUT connector (Illustration 2–40).
- [] 2. Connect short hose (2260360–9) to coolant hose "2" (Illustration 2–40).
- [] 3. Put other end of short hose into collection bottle (2260360–19). Make sure the conditioner power cord is plugged in.
- [] 4. Cover conditioner with paper towel to prevent any spills from going into conditioner case (Illustration 2–41).

ILLUSTRATION 2-41 FILLING COOLANT



Flushing Steps

Note: Two (2) screws will need to be removed in order to lift the power supply up to poor in coolant (Illustration 2–41).

- [] 5. Remove cap on conditioner. Use funnel and pour distilled water into conditioner to fill up the reservoir.
- [] 6. Turn on Main power to wallstand and turn on conditioner power (ensure power switch on side of conditioner is on). Continue to pour distilled water into conditioner until first 1–gallon bottle is completely empty.
- [] 7. Leave conditioner power ON until entire amount of distilled water has run through the conditioner and hoses and into the collection bottle (2260360–19). When the "Check Fluid" status (ThermoTek conditioner) or the "Err 20, Low Liquid Level Alarm" status (SMC conditioner) appears on the conditioner screen, move the short drain hose (2260360–9) from the partially full collection bottle (2260360–19) to the now empty 1–gallon distilled water container.
- [] 8. Continue flushing procedure with second gallon of distilled water.
- [] 9. Turn off conditioner power when second gallon is empty and after the conditioner screen displays the "Check Fluid" status (ThermoTek conditioner) or the "Err 20, Low Liquid Level Alarm" status (SMC conditioner).
- [] 10. Turn off main power to the system. The distilled water collected during the flush can be disposed of locally.

Repeat XQ/i Wallstand - Hose and Detector Purge

- [] 11. Remove distilled water from system hoses and detector using the syringe. Consult the previous section titled "XQ/i Wallstand Hose and Detector Purge" illustrations and detailed steps.
 - The distilled water being removed will be emptied into 1–gallon collection bottle (2260360–19) and not (2260360–13).
 - The distilled water collected in 2260360–19 can be disposed of locally.

Repeat XQ/i Wallstand - Conditioner Purge

Remove distilled water from the conditioner using the syringe. Consult previous section titled "XQ/i Wallstand – Conditioner Purge" for pictures illustrations and detailed steps.

- The distilled water being removed will be emptied into 1–gallon collection bottle (2260360–19) and not (2260360–13).
- The distilled water collected in 2260360–19 can be disposed of locally.

XQ/i Wallstand Reassembly

[]	1.	Connect conditioner power and signal wires (if disconnected), 2 coolant hoses, and 2 air hoses. Coolant hose "1" should be attached to the conditioner OUT connector.
[]	2.	Place paper towel on conditioner to prevent spills from entering conditioner (Illustration 2–41). Use a funnel to pour coolant from bottle (2352900) and fill reservoir in conditioner.
[]	3.	Turn On Main Power to system, and the conditioner power switch.
[]	4.	Slowly pour coolant (2352900) into conditioner until coolant level stays about 1 inch from top of reservoir.
[]	5.	Power down the system.
[]	6.	Replace DSA cover.

Return Coolant for Disposal

- [] 1. Place coolant return bottle (2260360–13) and MSDS form for coolant (part# 2353650) into return shipping box provided.
- [] 2. Place appropriate return address label (get from part 2353353–2) on box.

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