

PARTS LIST

MegaBACE 1000 DNA Analysis System

May 2003

Echelon Network PCAs

Part Number	Name	Description
63003028	PCA,CURRENT.MONITOR(63903028)	CMON PCA
<i>63903028</i>	<i>E.U.PCA,CURRENT.MON(63003028)*</i>	
63003047	PCA,ECHN,EPHV,V3(63903047)	EPHV PCA
<i>63903047</i>	<i>E.U.PCA,ECHN.EPHV(63003047)</i>	
63003084	PCA,STAGE(63903084)	SCAN PCA
<i>63903084</i>	<i>E.U.PCA,STAGE(63003084)</i>	
63003010	PCA,ECHN,INTC(63903010)	INTC PCA
<i>63903010</i>	<i>E.U.PCA,ECHN.INTC(63003010)</i>	
63003083	PCA,FLTR(63903083)	FLTR PCA
<i>63903083</i>	<i>E.U.PCA,FLTR(63003083)</i>	
63003080	PCA,BEAM(63903080)	BEAM PCA
<i>63903080</i>	<i>E.U.PCA,BEAM(63003080)</i>	
63003072	PCA,ECHN,TMPR.CNTRL(63903072)	TMPR PCA
<i>63903072</i>	<i>E.U.PCA,ECHN,TMPR.CNTRL(63003072)</i>	
63003952	PCA,ECHN,PREAMP(63903952)	ADAQ and PDIO PCA
<i>63903952</i>	<i>E.U.PCA,ECHN.PREAMP(63003952)</i>	

* Parts in italics are Exchangeable Units (Replaceable Field Units)

Internal Processor PCAs

Part Number Name

63003048	PCA,SLOT.PC,PENT
63003087	PCA.AY,ECHN,PCNSS10
63003953	PCA,ADAPTEC,SCSI,2930U
63003227	PCA,BACK.PLANE,ISA,85 LOT
63004765	PCA,PC.I/F(63904765)
<i>63904765</i>	<i>E.U.PCA,PC.I/F(63004765)</i>
63003070	PCA,ISA,SCSI(63903070)
<i>63903070</i>	<i>E.U.PCA,ISA,SCSI(63003070)</i>

Description

Internal Processor CPU PCA
Echelon Control PCA
SCSI Controller for Workstation
Motherboard for the Internal CPU
PCIF PCA
SCSI PCA for the internal CPU

PCAs (Misc.)

Part Number Name

63003292	PCA,ANODE.CON
63003961	PCA,PRESS,V2.0(EU63990005)
63003290	PCA,CATHODE.CON
63003940	PCA,P/S.DISTRIBUTION
63003956	PCA,PHOTO.DIODE

Description

Anode Connector PCA
Pneumatics Panel Connector PCA
Cathode Connector PCA
Distribution PCA inside the Power Supply
Capillary Detection Diode

Sensors Switches and Levers

Part Number Name

63003295	CBL.AY,OPTICAL.SENSOR
63003297	CBL.AY,SINGLE.SWITCH
63003071	CBL.AY,AC.PWR,SW,INTFC.PC
63003886	CBL.AY,OPTICAL.SENSOR,18"LONG
63003068	CBL.AY,OPTICAL.SNSR
63003306	SW,PSH,LEVER,DPDT,R,15A

Description

Single optical sensor with 12" cable
Microswitch with 14" cable
Main power switch assembly
Single optical sensor with 18" cable
Single optical sensor with 24" cable
Service Door Switch

Sensors Switches and Levers (cont')

63003348	LEVER,MOD.SW,UP
63003230	CBL.AY,SGL.SW,CE
63003204	CBL.AY,TRIP.SW.CATHOD
63003878	LEVER,SENSOR,TANK,ROBBINS
63003332	LEVER,SWITCH,CHERRY.0014-5519
63003866	SW.AY,FLTR,CHGR.DOOR,CE
63003892	CBL.AY,OPTICAL.SENSOR,24""DUAL"
63003897	CBL.AY,THERMISTOR,43",3PIN

Single lever for the Micro Switch
Microswitch with 14" cable
Triple microswitch assembly
Tank sensor lever for Robbins Plate
Extra long single lever for the Micro Switch
PMT Filter Door Switch Assembly
Dual Connector Optical Sensor for Scanning Stage
Temperature Sensor

Cathode Parts and Assemblies

Part Number Name

63003971	DOOR.AY,CATHODE
63003926	SLIDER,UPPER,CATHODE
63003923	SLIDER,LOWER,CATHODE
63003256	PLGR,RETR.RING,1/4-20
63003894	CYCLEPLATE,96.WELL,COLORLESS
63003883	PLNGR,RETRACT,RING
63003895	TANK,WATER (ROBBINS)
63003898	TANK,WATER..SKIRTED
63003899	TANK,WATER.SKIRTED-02
63003966	TRAY,CATHODE
63003228	ADAPTOR,MICROTITR,PLT
63003936	TRAY.AY,CATHODE (OLD ROBBINS)
63003917	TRAY,CATHODE,CYCLEPLATE
63003876	PIN,DOWEL,062X.750,55
63003245	PIN,TURN,TRAY

Description

Cathode Door
Top Cathode slider
Bottom Cathode Slider
Slide ring release older slides
96 well Robbins Plate
Release ring for the sliders
Robbins Cathode Tank
Obsolete Tank
New tank with spillways
ABI plate tray for cathode.
Adapter for new ABI plates in old ABI tray
Old Robbins Cathode Tray Complete with turning pins
Old Robbins Cathode Tray only no turning pins
Pins that move the turning pins
Turning pin early robbins cathode tray

Cathode Parts and Assemblies (cont')

63003217	RING,RTNG,.135IDX.22	Snap ring for turning pin
63003978	CATHODE,TRAY,ROBBINS	New Robbins Cathode Tray
63003881	PIN,TURN.TRAY,SKIRTED,-01	Turning pin for the cathode tray
63003880	PIN,TURN.TRAY,SKIRTED,-02	Turning pin for the cathode tray
63003218	SPRNG,EXT,.125.DIA	Spring for turning pin
63003868	SCR,2-56,.375,CAS-D	Screw holding the spring on the cathode tray
63003875	SCR,4-40,.093,SAS-D	Set screw for the cathode tray turning pins
63003957	SPCR,PLUNGER,SLIDER	Spacer that goes under the quick release pin

Anode Parts and Assemblies

Part Number Name

63003968	VESSEL.AY (OLD STYLE)	Vessel that is removable without screws
63003214	VESSEL.AY W/SCREWHOLES	New Vessel that uses screws
63003337	PLNGR,RETRACT,1/4-20,DELRIN/SS	Sping plunger for old removable Vessel
63003918	PLATE,COVER,MOUNT	Screw style vessel mount plate
63003935	CLAMP,ANODE	Clamping ring for the anode
63003285	BELT.DRIVE,.0816PTCH	Drive belt for Anode Clamping Ring
63003349	FLAG,RETAINER	Flag for the optical sensor for the array retainer
63004215	FLAGE,CLAMP	Flag for the optical sensor for the Anode clamp
63003099	O-RING,.230ID,.375OD	Package of 6 Array O-rings
63003042	O-RING,.671ID,.139DIA	Package of 6 Anode Vessel O-rings
63003025	COVER.AY,ANODE(63903025)	MegaBACE Anode Cover w/electordes
63903025	<i>E.U.COVER.AY,ANODE(63003025)</i>	
63003046	PLUG,ANODE.O-RING	Anode blockers
63003341	FLOW.CONTROL,1/8NPT	Flow control valve on the pneumatic cylinder
63003343	FLOW.CNTRL,10-32,2.8/4.2CFM	Anode speed control valve

Description

Anode Parts and Assemblies (cont')

63003925	SLIDER,UPPER,ANODE
63003922	SLIDER,LOWER,ANODE
63003335	FLAG,SLIDER,ANODE
63003972	DOOR.AY,ANODE
63003869	CBL.AY,JUMPER,ANODE.MECH.SW
63003924	INSULATOR,BASE.PLATE
63003882	SLEEVE,ANODE
63003919	FACE,STOPPER,ANODE

Top Anode Slider
Bottom Anode Slider
Optical sensor flag for the upper Anode Slider
Anode Door
Old Anode Jumper
Plastic base of the Anode
Flexible MegaBACE Vessel blockers
Front clearance plate of the Anode

Tools

Part Number Name

63003076	KIT,SVCE.TOOLS,MGBACE
63003223	PIN,ALIGN.TOOL
63003246	TOOL,96.WELL.CAT.CLNR
63003276	PIN,DOWEL,.125DIX.75L
63003293	MOUNT,TARGET,STAGE.AY
63003345	KNOB,MIRROR.MOUNT
63003863	TOOL, BEAM.HEIGHT
63003874	FIXTURE,OBJECTIVE.MIRROR
63003912	20MW.LASER.SERVICE.CONTROL KEY
63003913	TOOL.AY,PRELOAD
63003879	TOOL,INTERLOCK,DEFEAT,SER.DR
63003250	JUMPR,SRVC.DOOR.INTLK
63003890	TOOL,EXTENSION,TUBG,PNUEMATIC
63003900	MNL.SERVICE.CD.MB.
63003929	TOOL,ALIGN,ANODE.CATHODE

Description

The next 10 items
2 Stepped pins for aligning the CMON to the Stage
Cathode cleaning tool
2 Pins for aligning the Bearing to the scan arm
Bearing alignment pinholes
Package of 3 mirror handles
Laser alignment tool
Screw in mirror for the objective mount
Laser power supply control key
Capillary holder tool
For the electrophoresis Chamber door
For the PMT filter door
5' Pneumatic extention hose
CD of rev 2 of the MegaBACE Service Manual
Anode and Cathode placement tool for the front bezel

Tools (cont')

63003980	TOOL,FACE.PLATE,INSTALL
63003877	TOOL,APPL,RET.RING,.22DIA,EXT
63003976	TOOL,ALIGNMENT,PCB,ROBBINS
63003967	JIG,TRAY,CATHODE

Tool for converting between robbins and skirted plates
Tool for the snap rings on the cathode tray
Used for initial installation of the Cathode stage
Not a service tool

Optical

Part Number Name

63003233	KIT,FLTRS,BLUE,EMISS
63003350	FLTR.AY,520DF20, 10X10MM
63003860	FLTR.AY,585DF20, 10X10MM
63003861	FLTR,AY,555DF20,10X10MM
63003344	FLTR.AY,610LP,10X10MM
63003324	B/S.AY,540DRLP,10X15MM
63003327	B/S AY, 595DRLP, 10X15MM
63003315	MNTD PRIM B/S,510DRSP,RIGHT
63003962	FLTR.AY,LSR.BLOCKING,500LP
63003964	MNTD PRIM B/S, 545DRSP,LEFT
63003317	FLTR.AY,LSR.BLOCKING,540LP
63003938	FLTR.AY,LSR.LINE,488NM
63003916	FLTR.AY,LSR.LINE,532NM
63003321	LENS.AY,OBJ,ASPH-CLR
63003308	BEAM.COMBINER.MNT,488T/532R,1
63003307	MIRROR.AY,MOUNTED
63003937	MOUNTING,PINHOLE.AY
63003970	MIRROR.AY,SCAN.HEAD
63003254	DRV.COMP,SPRING,PLNGR

Description

Filters and B/S for Sequencing (next 6 items)
520DF20 PMT Filter
585DF20 PMT Filter
555DF20 PMT Filter
610LP PMT Filter
540DRLP Secondary beam splitter
595DRLP Secondary beam splitter
Blue primary beam splitter
Blue laser blocking filter on the primary beamsplitter
Green primary beam splitter
Green laser blocking filter on the primary beam splitter
Laser filter for the blue laser
Laser filter for the green laser
Objective
Beam Combiner
1st, 2nd, or 3rd turning mirror
Second achromat
Scan head turning mirror
Spring plunger for the 2nd Achromat

Motors and Fans

Part Number Name

63003318	MTR.AY,STEPPER,WIRED
63003326	CBL.AY,MOTOR.ANODE
63003328	CBL.AY,AUTO.FOCUS
63003947	MTR.AY,MTR/DRVR,RFK564BA
63003299	CBL.AY,FAN.PC
63003887	FAN.AY,12VDC,4.69SQ
63003932	BLOWER.AY,CROSS.FLOW
63003941	FAN.AY,DUAL,MTR.DRVR
63003742	FAN,AY,LSR,200CCF,20V,3PIN (63903742)

Description

Shutter, primary b/s, secondary b/s and filter motor
Anode locking ring motor
Focus motor
Scanning stage motor
Fan for the internal cpu box
Fan on the top of the cooling assembly
Squirrel cage fan for the electrophoresis chamber
Scanning stage motor driver fans
Laser power supply fan unit

Power Supplies

Part Number Name

63003064	P/S,LIN,+36V,500W(63903064)
63003235	P/S,+24V,500W,UNREG
63003093	P/S,DC,+24V@12A(63903093)
63003098	P/S,HV,20KV,24VDC.IN(63903098)
63903098	<i>E.U.P/S,HV,20KV,24VDC(63003098)</i>
63003945	P/S,DC,+5@25A,+12@3A,UN1V.IN(63903945)
63003948	P/S,DC,24V,5V,+12/-12,600W,PFC(63903948)
63903948	<i>E.U.P/S,DC,24V,5V,+12/-12(63003948)</i>
63003951	P/S,AC-DC.DIST,CE2001(63903951)
63903951	<i>E.U.P/S,AC-DC.DIST,CE2001(63003951)</i>
63902472	<i>E.U.P/S,AY,2-SUPPLY,AC,DE(63002472)</i>
63003955	P/S,LSR,AR,20MW,CE(63903955)
63903955	<i>E.U.P/S,LSR,AR,20MW.CE(63003955)</i>

Description

Heater power supply
Cooler power supply for 4 supply p/s
24 volt echelon p/s for 4 supply p/s
Electrophoresis high voltage power supply
CPU supply for 4 supply p/s
Gold box p/s for 2 supply power supply
Entire p/s assembly 1 supply model
<i>Replacement Supply 2 supply model U.S. replacement</i>
Blue laser power supply

Power Supplies (cont')

63003984	FAN,AY,AR,LR,208VAC
<i>63903984</i>	<i>E.U.FAN,AY,AR,LR,208V(63003984)</i>
63003983	CBL.AY,PMT,#1,PS
63003300	CBL.AY,PMT,#2,PS

Laser Power Supply, Entire Unit

PMT socket and PMT p/s for PMT 1
PMT socket and PMT p/s for PMT 2

Lasers

Part Number	Name
63003029	LSR,ION,488,20MW,CE(63903029)
<i>63903029</i>	<i>E.U.LSR,ION,488,20MW,CE(63003029)</i>
63003954	LSR,GRN,RPL.KIT(63903954)
<i>63903954</i>	<i>E.U.LSR,GRN.RPL.KIT(63003954)</i>

Description

Blue Laser

Green laser

Pneumatics

Part Number	Name
63003960	PNEUMATIC.AY,JAPAN(63903960)
<i>63903960</i>	<i>E.U.PNEUMATIC.AY,JAPAN(63003960)</i>
63003950	PNEUMATIC,PANEL.AY(63903950)
<i>63903950</i>	<i>E.U.PNEUMATIC.PANEL(63003950)</i>
63003034	FTG,COUP,INSR,STR
63003340	COUPLING.BODY,INLINE-W/1/8BARB
63003286	KIT,RELIEF.VALVE
63003313	LATCH.AY,SRVC.DOOR
63003888	TUBG,1/8,ID,URETHANE
63003889	TUBG,1/16",PEEK"
63003288	FTG,CONN,1/16,NPT
63003280	KIT,NUT/FERRULE,BLKHD,UNION

Description

Pneumatics panel tested for Japan

Pneumatics panel

Male low pressure fitting with 1/8" barb

Female inline low pressure fitting with 1/8" barb

Low pressure relief valve for cathode upgrade

Door latch assembly

10' of clear low pressure tubing

27" of Green high pressure tubing

High Pressure Fitting on the Anode cover

Nut and ferrule for High Pressure fitting

Pneumatics (cont')

63003933	CYL,50DIA.X50MM.TRAVREL
63003338	COUPLING.BDY,PNL.MNT
63003339	COUPLING.INSR,PNL.MNTW/1/8BARB
63003334	ELBOW.0625.TUBING
63003867	FTG,CPLNG.BDY,PNL.MNT,F.THD
63003336	FTG,3/8,NPT-1/8,BARB,90DEG
63003342	FTG,1/4NPT-1/8BARB,STR
63003333	FTG,10-32,MALE,1/8,BARB,STR

Cathode main pneumatic cylinder
Panel mount Female low pressure fitting
Panel mount Male low pressure fitting
Guide for the High pressure line on the Anode
Panel mount coupling on Electrophoresis Chamber
Brass screw in fitting with 1/8" barb
Brass screw in fitting with 1/8" barb
Brass screw in fitting with 1/8" barb

Cables and pulleys

Part Number Name

63003285	BELT.DRIVE,.0816PTCH
63003281	DRV.COMP.BELT
63003304	CBL.AY,GREEN.LSR.CNTRL
63003884	CBL.AY,DATA.ADAQ,PC
63003885	CBL.AY,AC.PWR,MNLU5,16"
63003891	CBL,AY RJ45 CATS,PATCH CORD
63003927	HARNESS.AY,CABLES,SYSTEM,CAE
63003346	PULLEY,30.GRV,.25ID,.0816PTCH

Description

Anode locking ring drive belt
Focus motor drive belt
Green laser control cable old P/S
50 pin cable between the ADAQ and PCI/F
AC power cable from internal CPU to P/S
2 ft RJ45 cable
Main Wiring Harness for the MegaBACE
Focus and Scan stage idler pulley

Miscellaneous Assemblies

Part Number Name

63003031	CAPILLARY,MOUNT.AY
63003073	B/S.CHGR.AY,SECONDARY
63003207	LENS.MNT.AY,ACHROMAT
63003215	SHUTTER.AY,3-POSITION

Description

Capillary holder Assembly
Entire Secondary B/S assembly
1st Achromat assembly
Shutter Assembly

Miscellaneous Assemblies (cont')

63003915	HEAD.AY,SCAN,STG(63903915)	Scan Bearing section of the scan stage
<i>63903915</i>	<i>E.U.HEAD.AY,SCAN.STG(63003915)</i>	
63003920	ARM.AY,BEAMSPLITTER,SECONDARY	Secondary B/S Arm complete
63003930	HEATER.AY,TPR.CHAMBER	Heater
63003931	COOLER.AY,THERMOELECTRIC	Peltier Cooler
63003963	B/S,PRIMARY.CHGR.AY,488/532	Entire primary beam splitter assembly
63003914	FOCUS.AY,SCAN.STG(63903914)	Reference plate assembly
<i>63903914</i>	<i>E.U.FOCUS.AY,SCAN.STG(63003914)</i>	
63003928	CATHODE.AY.SKIRT(63903928)	Entire Cathode Assembly with Tank
<i>63903928</i>	<i>E.U.CATHODE.AY,SKIRT(63003928)</i>	
63003946	STG.AY,SCANNING,CAE(63903946)	Entire Scanning Stage including motors
<i>63903946</i>	<i>E.U.STG.AY,SCANNING,CAE(63003946)</i>	
63003949	MODULE,ELECTRONIC,CAE,CE(63903949)	Entire CPU Box
<i>63903949</i>	<i>E.U.MODULE,ELECTRONIC,CAE(63003949)</i>	
63003965	FLTR.CHGR/PMT.AY(63903965)	Entire filter changer assembly with pmts
<i>63903965</i>	<i>E.U.FLTR.CHGR/PMT.AY(63003965)</i>	
63003911	FLTR.CHGR.ARM.AY	Filter Changer Arm PMT 1 or 2
63003973	PANEL.AY,FRONT	Front Panel with LCD Displays
63003958	ANODE AY(63903958)	Complete Anode Assembly
<i>63903958</i>	<i>E.U.ANODE.AY(63003958)</i>	
63003213	MTR.AY,AUTO.FOCUS	Complete focus drive assembly w/sensor
63003320	MTR.AY,SCANNING.STAGE	Motor on mount for the scanning stage

Misc. - Mechanical Components

Part Number	Name	Description
63003969	STUD,BALL,6-32,.THK.SHEET	Pkg of 10 Ball Studs for the front panel mount
63003934	FLANGE,DUCT,EXHAUST.FAN.AY	4" flange for the laser P/S fan unit
63003939	FOAM,FILTER.OPT.ENC	Filter for the top of the optics enclosure
63003942	FILTER,AIR,INLET,SKIN	Filter for the left side panel
63003910	PLATE/INSUL,ISOL,SCAN,STAGE	Scan Stage grey mounting plate
63003893	SPRING,GAS,40LBS	Filter door pneumatic cylinder
63003870	BRK.SENSORS,SCAN,STAGE	Mounting bracket for the sensor of the scan stage
63003871	SUPPORT,SCAN,STAGE.TO.MOTOR	Grey plastic support bar on the scanning stage
63003865	STANDOFFS	Pkg of 10 plastic standoff for the ADAQ & PDIO
63003278	SHFT,.2497DIA,.125L	Shaft for scanning stage idler pulley
63003275	BRG,BALL,FLANGED	Bearing for the focus lead screw
63003252	BRG,B/S,WHL,FLANGED	Scan stage idler pulley bearings
63003248	BRG,LINEAR,XROLLER,3"	Scan stage bearing
63003100	SPR,WAV,.256ID,.367OD	Spring washer for Idler pulley
63003058	COVER,FLTR.CHGR.ARM	Plastic retaining clip for the filter changer arm
63003059	COVER,SEC.BMSPLTR	Plastic retaining clip for the Secondary B/S arm
63003018	FLAG,SCAN.STAGE	Scan Flag

Misc. Electrical Components

Part Number	Name	Description
63003864	FUSE,5.0A,250V,5X20MM	5 amp fuse
63003294	SW,PNL,RCKR.DPST.250V,10A	Main power Switch
63003265	LCD.AY,LFT.FRNT.PAN	Display on the front of the MegaBACE
63003266	LCD.AY,RT.FRNT.PAN	Display on the front of the MegaBACE
63003074	RELAY.AY,20A	Laser power supply fan unit relay