COMPARISON BETWEEN A292/A293 AND A229

SECTION 1: OVERALL INFORMATION

Section	Item	Description	Page
Specifi-cations	Copy Size	Minimum: A5/5 1/2" x 8 1/2" Lengthwise in 2nd Tray	1-1
	Zoom	Minimum: 25% (A229: 32%)	1-2
	Copying Speed	70/55 cpm (A229: 65/55 cpm)	1-2
	1 to 1 Copying Speed with ADF	70 cpm (A229: 50 cpm) ARDF: New (Same as Bellini)	N/A
	Resolution	Scanning: 600 dpi (A229: 400 dpi) Printing: 600 dpi (A229: 400 dpi)	1-2
	First Copy Time	Face Up: 3.5 seconds, Face Down: 5.3 seconds (A229: Face Up: 3.7 seconds, Face Down: 5.5 seconds)	1-2
	Copy Paper Capacity	Tray 1: 3,100 sheets (A229: 1,000 sheets) Tray 3: 550 sheets (A229: 1,500 sheets)	1-2
	Memory Capacity	RAM: 48 MB (A229: 12 MB) HDD: 4.3 GB (A229: 1.7 GB)	N/A
	Power Consumption	(Refer to service manual)	1-3
	Additional Feature	Document Server function is available as a standard function.	N/A
	Additional Feature	User Stamp, etc.	N/A
	Peripherals	Finisher (Brazos B, B312): Pre-stack function Finisher (Tonegawa B, A763): Folds paper in half with 2 staples Finisher (Victoria, B302): Pre-stack function, 100 sheets for staple (Same as Bellini) Punch Unit (for Brazos B and Victoria, A812): 2 holes (80 mm / 6.5 mm) (Same as A229) 3 holes (108-108 mm / 8 mm) (Same as A229) 4 holes (21-70-21 mm / 6.5 mm) (New) 4 holes (80-80-80 mm / 6.5 mm) (New) 2 holes (70 mm / 8 mm) (New) LCT (Oahu, A698): Upgraded version Copy Connector Unit (B322) Output Tray (B333) Tab Sheet Holder (B373) 8 1/2" x 14" Size Kit (B375)	1-4
	Consumable	New Toner (NA: Type 5105D, EU/Asia: Type 5205D) New Developer (Type 15) Toner Particle: 9.5 μm (A229: 7.5 μm)	2-49

SECTION 2: DETAILED DESCRIPTIONS

Section	Item	Description	Page
Scanning	Overview	• The number of exposure lamp is one. (A229: 2 lamps) • The CCD is changed to 4-channel type because of a higher processing speed. (A229: 2 channels) • A reflector is added to 1st scanner. • The Scanner Motor has been changed to a DC Servo type because of a higher processing speed. • The location of Lamp Regulator moves onto the 1st scanner.	2-13
Laser Exposure	Overview	• The LD unit and Polygon Motor have been changed because of a higher processing speed. • The method controlling the LD has been changed because the standard resolution has been changed from 400 dpi to 600 dpi.	N/A
Process Control	Image Density Control	The toner amount in the development unit is updated using Vsp/Vsg data in addition to the Vref update.	2-36
Drum Unit	Drum Flange	The holes for airflow have been added to Drum Flange to make cooling power up because of higher processing speed.	2-47
Drum Unit	Rotation Speed	362 mm/s (A229: 330 mm/s) This is because a higher copying speed.	N/A
	Corona Wire Cleaner	One of the conditions making the cleaner start moving “only if the fusing temperature is lower than 100°C” has not been used any more because the other condition “only when 5000 or more copies have been made since the last movement” is effective enough to function.	2-43
Cleaning	Cleaning Brush	• The turning direction of the brush has been changed to the counter direction to increase the cleaning ability. • The brush has been changed from a rope type to a straight type. A rope type scrapes off the drum surface too much because of the change of the turning direction.	2-44
	Cleaning Blade Side-to-Side Movement	The location of the cam gear is changed onto the main frame to increase reliability. (Same as Penguin)	2-46
Develop-ment	Toner Supply Control	TBA	N/A
	ID Sensor Pattern	The pattern has become darker to increase reliability of toner supply control.	N/A
	Lower Development Roller	The shaft of the roller does not turn. (Same as Penguin) It is not necessary to lubricate conductive grease on the shaft.	N/A

Section	Item	Description	Page
Transfer	Transfer Belt	The surface treatment has been changed to increase cleaning ability.	N/A
	Cleaning Bias Roller	The nylon tube has been added as the surface of the cleaning bias roller to increase the cleaning ability. This allows to increasing the maximum charging voltage up to 1000 V (A229: 330 V).	N/A
	Bushing	A bearing has been added to the bushing to make the movement smoother.	N/A
	Gear	The gear has been changed to a diagonal type with the color of black to decrease a jitter level.	2-58
	Transfer Current	1st Copy (Front): 65µA (A229: 60µA) 2nd Copy (Front): 65µA (A229: 60µA) By-pass Tray (Front): 75µA (A229: 70µA) Post Card (Front): 165µA (A229: 150µA) This is because of a higher drum rotation speed.	SP 2-301
Paper Feed	Torque Limitter	The type of the Torque Limitter has been changed from a non-contact magnet type to a metal powder type to increase reliability.	N/A
	Paper size setting in 2nd tray	The paper size setting can be done at the front side of the tray for easier operation.	2-72
	By-pass Tray Switch	The By-pass Tray Switch has been deleted. The by-pass tray indicator is always on the operation panel and turns on when paper is placed in the tray.	N/A
	Paper Feed Mode	The thick paper mode is used for any paper type in all paper feed stations to increase paper transportation ability.	N/A
Toner Recycling	Condition of “Full Toner Collection Bottle”	The number of copies, which can be made after the toner overflow switch is activated and the “full toner collection bottle” indication lights, becomes only “up to 100 copies”. The other one “the copy job is allowed to end” is not effective any more.	N/A
Fusing	Inner Cover	The grip and the jam removal decal have been changed. The procedure of jammed paper removal has also been changed.	N/A
	Fusing Sensor	The Fusing Sensor has been added to detect a jammed paper with an accordion shape.	2-73
Paper Exit/Duplex	Inverter Exit Clutch	The Inverter Exit Clutch has been added to stop a paper coming into the duplex unit for a while. This is to keep the maximum productivity of printing even when it takes a longer time for image processing for a paper coming out of the duplex unit. When the clutch is ON, paper stops.	N/A
	Inverter Exit Sensor	The Inverter Exit Sensor has been added to control the ON/OFF timing of the Inverter Exit Clutch.	2-79
	Jogger Start Timing	The Jogger Fences start moving 83 ms after the trailing edge of paper passes the Duplex Entrance Sensor. (A229: 100 ms)	N/A
Ozone Filter		An inlet is added to change the airflow direction of the exhaust fan to downward. This is to increase the cooling ability and decrease the ozone smell level. The shape of the rear cover has been changed.	N/A

Section	Item	Description	Page
Electrical Compo-nents	BICU Board	• Scanner control circuit has been independent from SBICU as MCU (Motor Control Unit) and Scanner Motor Drive Board is deleted. The name of SBICU is changed to BICU. This is because the Scanner Motor has been changed from a stepping motor to a servo motor to enable the copying speed in the ADF 1 to 1 mode to be 70 cpm. • The exposure lamp, APS sensor and scanner HP sensor are also connected to the MCU.	N/A
	I/O Board	The RDS function has been independent from the I/O board as RDS Board and has been controlled by the BICU board because of the following reasons: 1. The I/O board can completely turn off in the weekly timer off mode. 2. It has been possible that only the RDS board is replaced.	N/A
	PSU	A 38V output has been added for the scanner motor that is changed from a stepping motor to a servo motor.	N/A
	CNB (Connector Board)	This is a new name of the Interface Board which the functions for the registration motor, by-pass motor and development motor are deleted from. Those functions are on the DRB (Driver Board) as a new board. This is to reduce the harnesses used.	N/A
	12V Power Supply Board	The DC/DC converter has been deleted and its function has moved to the PSU.	N/A
	DRB (Driver Board)	This is an interface board for the signal lines of the registration motor, by-pass motor and development motor. The power line for each motor is connected to the CNB.	N/A
	Copy Connect Board	The connection between the BICU and Copy Connect Board has been changed from via the FCC cable to via the interface board. This is to make installation easier.	N/A
	Printer Controller	The connection between the BICU and Printer Controller has been changed from only via the FCC cable to via the interface board and the FCC cable. This is to make installation easier.	N/A

SECTION 3: INSTALLATION

Section	Item	Description	Page
Installation Procedure	Finisher (B302, B312)	• The caps on the upper left cover of the copier have not been equipped, so that it is not necessary to remove them when a finisher is installed. • New type of grounding bracket.	3-22 3-29
Installation Procedure	Output Tray	• A cavity has been made in each Paper Exit Roller and a plug is prepared beside each roller on the shaft. The plugs are necessary to be inserted into the cavities. • The caps on the upper left cover have become accessories of the Output Tray and are necessary to be installed. • The stack height sensors at the paper exit area have become accessories of the Output Tray and are necessary to be installed.	

SECTION 4.2.2.: SERVICE PROGRAM MODE TABLE

Mode No.	Mode	Description	Page
1-901	CPM change for thick paper	The setting range is changed from 0 to 2 to 0 to 3 as follows: 0: None 1: 55 cpm at 165°C (A229: 50 cpm) 2: 45 cpm at 165°C (A229: 45 cpm) 3: 35 cpm (newly added)	4-12
2-001-3	Charge Corona Bias Adjustment	Factory setting: -1300 µA (A229: -1200 µA) This is because the copy speed is increased.	4-12
2-201-2	ID Sensor Pattern	Factory setting: -400 V (A229: -440 V)	4-14
2-201-3	OHP Sheet	Factory setting: -300 V (A229: -550 V)	4-15
2-201-4	Development Performance	Factory setting: -280 V (A229: -320 V)	4-15
2-210	ID Sensor Interval	Factory setting: 10 copies (A229: 50 copies)	4-15
2-220	VREF Manual Setting	Factory setting: 3.0 V or 2.5 V (A229:2.5 V)	4-15
2-301-1	Transfer Current Adjustment	Factory setting: 65 µA (A229: 60 µA) This is because the copy speed is increased.	4-16
2-301-2	Transfer Current Adjustment	Factory setting: 65 µA (A229: 60 µA) This is because the copy speed is increased.	4-16
2-301-3	Transfer Current Adjustment	Factory setting: 75 µA (A229: 70 µA) This is because the copy speed is increased.	4-16
2-301-4	Transfer Current Adjustment	Factory setting: 165 µA (A229: 150 µA) This is because the copy speed is increased.	4-16
2-301-6	Transfer Current Adjustment	This function is new.	4-16
2-801	TD Sensor Initial Setting	This function can also be performed in the Wait condition.	4-17
2-902-4 2-902-5	Printing Test Pattern	These functions are new.	4-17
2-906-2	Vcont Manual Setting	This function is new.	4-18
2-962	Auto Process Control	This function can also be performed in the Wait condition.	4-19
2-963	Toner Supply From Toner Bottle	This function can also be performed in the Wait condition.	4-19
2-966	Periodical Auto Process Control	This function is new.	4-20
2-967	Auto Image Density Adjustment	This function is new.	4-20
2-970	Transfer Belt Resistance Value Display	This function is new.	4-20
2-971	Output Value Measured Between Copies	This function is new.	4-20
3-001-2	ID Sensor PWM Setting	This function can also be performed in the Wait condition.	4-20
3-902-7	Process Control Data Display	This function is new.	4-21
4-015	Scanner Speed Adjustment	This function is new.	4-22
4-902	SBU Setting	All the functions in SP4-901-X are shifted to SP4-902-X.	4-23 to 4-27

Mode No.	Mode	Description	Page
5-824	Upload NVRAM Data	This function is new.	4-50
5-825	Download NVRAM Data	This function is new.	4-50
5-826	Program Upload	This function is new.	4-50
5-829	Stamp Data Download	This function is new.	4-50
5-921	Stamp Data Download	This function is new.	4-51
5-922	Counter Operation Setting	This function is new.	4-51
5-923	Edge Erase Standard	This function is new.	4-51
5-954	Copy Server password Display	(A229: SP5-940)	4-51
5-965	All Copy Server File Delete	This function is new.	4-51
6-116	Thick Paper Count	This function is new.	4-53
6-801	Copy Connect I/F Test	This function is new.	4-53
6-901	Original Exchange Time Adjustment	This function is new.	4-53
6-902	Saddle Stitch Adjustment	This function is new.	4-53
7-304-24 7-304-25 7-304-26	Total Copies By Copy Mode	These functions are new.	4-56
7-330	Connect Copy Job	This function is new.	4-58
7-331	Connect Copy: Copy	This function is new.	4-58
7-332 7-333	Connect Copy: Copy Number by Copy Mode	These functions are new.	4-58 4-59
7-504-35 to 7-504-40	Copy Jam Counter by Jam Location	These functions are new.	4-61
7-808	Counters Reset	The counters which are reset: SP7-003, SP7-006, SP7-206 and SP7-101-132 (A229: SP7-003, SP7-006 and UP1-19-2)	4-64
7-830	Copy Counter by Paper Size	This function is new.	4-64

SECTION 4.2.4: INPUT CHECK

Class 3 no.	Bit no.	Description	Reading	
			0	1
9 (Motor Lock /Transport)	7	Drum Motor Lock	Overload	Normal
	6	By-pass Feed Motor Lock	Overload	Normal
	5	Development Motor Lock	Overload	Normal
	4	Fusing Motor Lock	Overload	Normal
	3	***LD Unit Home position Sensor***	***Detected***	***Not detected***
	2	***Fusing Sensor***	***Paper detected***	***No paper***
	1	Exit Sensor	Paper detected	No paper
	0	Tray Paper Limit Sensor	Not full	Full
12 (LCT2)	***7***	***Fusing Cooling Fan Motor Lock***	***Overload***	***Normal***
	6	Not Used		
	5	Front Door Safety Switch	Closed	Open
	4	Not Used		
13 (By-pass)	7	LCT Paper Position Sensor	Detected	Not detected
	6	Toner End Sensor	Toner End	Not toner end
	5	***Not Used***		
	4	Relay Sensor	Paper detected	No paper
	3	By-pass Paper End Sensor	Not paper end	Paper end
	2	Registration Sensor	Paper detected	No paper
	1	Not Used		
	0	Not Used		
14 (Unit Set)	***7***	***Inverter Exit Sensor***	***Detected***	***Not detected***
	6	Not used		
	5	Key Counter Set	Set	Not set
	4	Total Counter Set	Set	Not set
	3	Polygon Motor Cooling Fan Lock	No lock	Lock
	2	Toner Recycling Sensor	Pulse	Pulse
	1	Drum Unit Set	Set	Not set
	0	Fusing Unit Set	Set	Not set

SECTION 4.2.5: OUTPUT CHECK

No.	Description	No.	Description
47	***Inverter Exit Clutch***	***71***	
72		***73***	
74		***77***	
78		***79***	

SECTION 5.1: PM TABLE

	EM	150 K	300 K	450 K	Expected Life	NOTE
SCANNER/OPTICS						
1st, 2nd, 3rd Mirror		C	C	C		Optics cloth
Reflectors		***C***	***C***	***C***		***Optics cloth (Newly added)***
White Reference Plate		***I***	***I***	***I***		***Water (Newly added)***
Scanner Guide Rails		C	C	C		Dry cloth
Exposure Glass	C	C	C	C		Dry cloth or alcohol
Toner Shield Glass		C	C	C		Optics cloth
Optics Dust Filter		I	R	I		Blower brush
AROUND THE DRUM						
Charge Corona Wire		***C***	***C***	***C***	***300K***	***Dry Cloth*** ***A229: 150K-Replacement***
Charge Corona Casing		C	C	C		Damp cloth
Corona Wire Cleaner		***C***	***C***	***C***	***300K***	***A229: 150K-Cleaning***
Drum Potential Sensor		C	C	C		Blower brush
Charge Corona Grid		***C***	***C***	***C***	***300K***	***Blower brush*** ***A229: 150K-Cleaning***
ID Sensor		C	C	C		Blower brush; initialize with SP3-001-2 after cleaning.
Quenching Lamp		C	C	C		Dry cloth
Pick-off Pawls		C	C	C		Dry cloth Replace if necessary.
Cleaning Blade					***300K***	***A229: 150K-Replacement***
Cleaning Brush					***300K***	***A229: 300K-Replacement***
Cleaning Brush Seal			C			Dry cloth
Cleaning Side Seals		I	I	I		Dry cloth
Cleaning Entrance Seal		C	C	C		Dry cloth Replace if necessary
DEVELOPMENT UNIT ***"Development Roller Shaft (Lower)" is deleted. (A229: 150K-Lubricate)***						
Developer			R			
Side Seals		I	I	I		Dry cloth or blower brush
Development Filter		R	R	R		
Entrance Seal		C	C	C		Dry cloth or blower brush
Air Filter – Large/ Small		R	R	R		
Drive Gears		C	C	C		Blower brush
Toner Bottle Holder		C	C	C		Dry cloth or vacuum cleaner
Toner Hopper Entrance		C	C	C		Dry cloth
Development Roller Shaft		C	C	C		Dry cloth or blower brush

	EM	150 K	300 K	450 K	Expected Life	NOTE
PAPER FEED						
Registration Rollers		C	C	C		Water or alcohol
Relay Rollers		C	C	C		Water or alcohol
Paper Dust Remover		C	C	C		Dry cloth
Registration Sensor		C	C	C		Blower brush
Relay Sensor		C	C	C		Blower brush
Paper Feed Rollers		***C***	***C***	***C***	***300K***	***Replace pick-up, feed and separation roller as a set. Check the counter value for each paper tray station (SP7-204). If the value has reached 300K, replace the rollers. After replacing the rollers, reset the counter (SP7-816). A229: 150K-Replacement***
Paper Feed Guide Plate		C	C	C		Water or alcohol
Vertical Transport Rollers		C	C	C		Water or alcohol
Paper Feed Sensor		C	C	C		Blower brush
TRANSFER BELT UNIT						
Transfer Belt		***C***	***C***	***C***	***450K***	***Dry cloth A229: 300K-Replacement***
Cleaning Roller Cleaning Blade				***C***	***450K***	***A229: 300K-Replacement***
Transfer Entrance Guide Plate		C	C	C		Dry cloth
Belt Drive/Guide/ Bias Roller/Cleaning Roller		***C***	***C***	***C***		***Alcohol A229: 300K-Cleaning***
Transfer Exit Guide Plate		C	C	C		Dry cloth
FUSING/PAPER EXIT ***"Pressure Roller Cleaning Brush" (EU/Asia only) is deleted. (A229: 150K-Replacement)***						
Hot Roller		***I***	***I***	***I***	***200K***	***A229: 150K-replacement***
Hot Roller Bearings		***I***	***I***	***I***	***600K***	***A229: Replace if necessary***
Pressure Roller		***I***	***I***	***I***	***450K***	***Replace as a set.***
Pressure Roller Bearings		***I***	***I***	***I***	***450K***	***A229: 300K-replacement***
Fusing Thermistor	I	I	I	I		Replace if necessary
Hot Roller Strippers	***C***	***C***	***C***	***C***	***300K***	***Water or alcohol A229: 300K-replacement***
Oil Supply Roller Bushings	I	I	I	I		Replace if necessary
Pressure Roller Cleaning Roller and Bushings		R	R	R		Replace as a set
Oil Supply Roller		R	R	R		Replace as a set
Oil Supply Cleaning Roller		R	R	R		
Fusing Entrance and Exit Guide Plates		C	C	C		Clean with water or alcohol
Transport/Exit Rollers			C			Water
Exit Anti-static Brush			***I***			***A229:150K-Inspection***

	EM	150 K	300 K	450 K	Expected Life	NOTE
DUPLEX						
Entrance Sensor		C	C	C		Blower brush
Reverse Roller		C	C	C		Water or alcohol
Separation Rollers		C	C	C		
Duplex Roller		C	C	C		
Feed Rollers		C	C	C		
Entrance Anti-static Brush		I	I	I		
Reverse Junction Gate		C	C	C		Dry cloth
OTHERS						
Ozone Filter: PCU			R			
Ozone Filter: Duct			***R***			***Newly added***
Filter: Vacuum		***R***	***R***	***R***		***Newly added***
Used Toner Tank	***I***	***I***	***I***	***I***		***Clean or Replace if necessary (about 1,000K copies). A229:1,500K-Inspection***

	EM	80K	160K	240K	NOTE
ADF (the PM interval is for the number of originals that have been fed)					
Transport Belt	C	R	R	R	Belt cleaner
Feed Belt	C	R	R	R	Belt cleaner
Separation Roller	C	R	R	R	Dry or damp cloth
Pick-up Roller	C	R	R	R	Dry or damp cloth
Sensors	C	C	C	C	Belt brush
Drive Gears		L	L	L	Grease G501

	EM	150 K	300 K	450 K	Expected Life	NOTE
LCT						
Paper Feed Roller		***C***	***C***	***C***	***300K***	***Check the counter value for the LCT (SP7-204-5). If the value has reached 200K, replace the rollers. After replacing the rollers, reset the counter (SP7-816-5). A229: 150K-Replacement***
Pick-up Roller		***C***	***C***	***C***	***300K***	
Separation Roller		***C***	***C***	***C***	***300K***	
Bottom Plate Pad		C	C	C		Dry or damp cloth
Paper Feed Clutch					***1,200K***	***A229: 1,500K-Replacement***
Relay Clutch					***1,200K***	***A229: 1,500K-Replacement***
Pick-up Solenoid					***2,400K***	***A229: 1,500K-Replacement***

	EM	150 K	300 K	450 K	Expected Life	NOTE
3,000-SHEET FINISHER (50-SHEET STAPLER): B312						
Rollers	C	C	C	C		Clean with water or alcohol.
Brush Roller	***I***	***I***	***I***	***I***	***2,400K***	***A229: Replace if necessary.***
Discharge Brush	C	C	C	C		Clean with a dry cloth.
Sensors	C	C	C	C		Blower brush
Jogger Fences	I	I	I	I		Replace if necessary.
Punch Waste Hopper	I	I	I	I		Empty the hopper.

	EM	150 K	300 K	450 K	Expected Life	NOTE
3,000-SHEET FINISHER (100-SHEET STAPLER): B302						
Rollers	C	C	C	C		Clean with water or alcohol.
Brush Roller	I	I	I	I	2,000K	Check the counter value for the total copies by copy mode for staple (SP7-304-6). If the value has reached 600K, replace the brush roller.
Discharge Brush	C	C	C	C		Clean with a dry cloth.
Sensors	C	C	C	C		Blower brush
Jogger Fences	I	I	I	I		Replace if necessary.
Punch Waste Hopper	I	I	I	I		Empty the hopper.

	EM	150 K	300 K	450 K	Expected Life	NOTE
BOOKLET FINISHER: A763						
Rollers	C	C	C	C		Clean with water or alcohol.
Brush Roller	I	I	I	I		
Discharge Brush	C	C	C	C		Clean with a dry cloth.
Sensors	C	C	C	C		Blower brush
Jogger Fences	I	I	I	I		Replace if necessary.
Punch Waste Hopper	I	I	I	I		Empty the hopper.

SECTION 7: TROUBLESHOOTING

Section	Item	Description	Page
Service Call Conditions	SC124	Scanner motor encoder signal error (New)	7-3
	SC125	Scanner motor speed error 1 (New)	7-3
	SC126	Scanner motor speed error 2 (New)	7-3
	SC127	Scanner motor encoder rotating direction error (New)	7-3
	SC128	Scanner motor start error (New)	7-4
	SC129	Scanner motor speed control error (New)	7-4
	SC130	SBU error (New)	7-4
	SC300	Charge corona output error 1 (A229: SC302-01)	7-5
	SC301	Charge corona output error 2 (A229: SC302-02)	7-5
	SC302	Charge corona output error 3 (A229: SC302-03)	7-5
	SC303	Charge corona output error 4 (A229: SC302-04)	7-5
	SC305	Charge corona wire cleaner error 1 (A229: SC303-01)	7-5
	SC306	Charge corona wire cleaner error 2 (A229: SC303-02)	7-6
	SC310	Potential sensor error 1 (A229: SC370-01)	7-6
	SC311	Potential sensor error 2 (A229: SC370-02)	7-6
	SC312	Potential sensor error 4 (A229: SC370-04)	7-7
	SC314	Potential sensor error 5 (A229: SC370-05)	7-7
	SC329	LD unit home position error 3 (A229: SC329)	7-9
	SC330	LD unit no initial setting (A229: SC329)	7-9
	SC331	LD unit home position error 4 (A229: SC329)	7-10
	SC332	LD unit present position error (A229: SC329)	7-10
	SC335	Polygonal mirror motor error 1 (A229: SC320)	7-10
	SC336	Polygonal mirror motor error 2 (A229: SC320)	7-11
	SC337	Polygonal mirror motor error 3 (A229: SC320)	7-11
	SC338	Polygonal mirror motor error 1 (A229: SC320)	7-11
	SC340	TD sensor output error (A229: SC390-01)	7-12
	SC341	TD sensor adjustment error 1 (A229: SC390-02)	7-12
	SC342	TD sensor adjustment error 2 (A229: SC390-03)	7-13
	SC345	Development bias leak (A229: SC391)	7-13
	SC350	ID sensor error 1 (A229: SC350-01)	7-13
	SC351	ID sensor error 2 (A229: SC350-02)	7-14
	SC352	ID sensor error 3 (A229: SC350-03)	7-14
	SC353	ID sensor error 4 (A229: SC350-04)	7-15
	SC354	ID sensor error 5 (A229: SC350-05)	7-15
	SC360	Hard disk detection error 1 (A229: SC360)	7-15
	SC362	Hard disk detection error 2 (A229: SC360)	7-16
	SC364	Hard disk drive error (A229: SC361)	7-16
	SC366	Hard disk bad sector maximum (New)	7-16
	SC367	Hard disk (HDD:R) bad sector maximum (New)	7-16
	SC370	IMAC (image compression IC) input FIFO error (A229: SC362)	7-17
	SC372	IMAC (image compression IC) output FIFO error (A229: SC362)	7-17
	SC374	IMAC (image compression IC) modes setting error (A229: SC362)	7-17
	SC376	Data transmission error (A229: SC363)	7-17
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	SC388	Data transmission time out (Hard disk read) (New)	7-18
	SC390	CRC error (A229: SC366)	7-19

Section	Item	Description	Page
Service Call Conditions	SC391	Image storage address error (A229: SC365)	7-19
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	SC401	Transfer roller open error (A229: SC401-02)	7-19
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	SC650	Key card error 1 (Japan only)	-
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	SC653	Key card error 4 (Japan only)	-
	SC701	ADF original pick-up malfunction 2 (New)	7-29
	SC702	ADF feed-in motor lock (New)	7-30
	SC703	ADF transport motor lock (New)	7-30
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	SC737	Finisher disposal staple full (New)	7-34
	SC738	Finisher shift tray lift motor error (New)	7-34
	SC740	1,000-sheet finisher error in finisher area (New)	7-34
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	SC959	Printer setting ID error (A229: SC959)	7-36
	SC960	Printer return ID error (A229: SC960)	7-37

Section	Item	Description	Page
Service Call Conditions	SC970	Scanner ready error (New)	7-38
	SC984	HDD response error (A229: SC981)	7-38
	-	SC370-3 is deleted. (A229: Page 7-9)	-
	-	SC370-6 is deleted. (A229: Page 7-10)	-
	-	SC370-7 is deleted. (A229: Page 7-11)	-
	-	SC491 is deleted. (A229: Page 7-13)	-
Electrical Compo-nent Defect	Con-nector Number	Connector numbers are changed.	7-40 to 7-44
	Sensors	Duplex Inverter Sensor (S35) and Fusing Exit sensor (S43) are added	7-42 7-43
Blown Fuse Conditions	Fuse	The number of fuses is decreased.	7-45

SECTION 8: OPTION – 3,000-SHEET FINISHER (BRAZOS B, "B312")

Section	Item	Description	Page
Specifications	Paper weight in punch mode	The maximum paper weight, that the 2-hole and 3-hole punch units can handle, has become 157 g/m^2. (A229: 128 g/m^2) The 4-hole types can handle up to 128 g/m^2. This is because the punch units have been new types that are the same as those of the Bellini.	B312-1
	Paper size in staple mode	The paper sizes with the same width like A3 and A4 sideways and LG and LT sideways can be stapled together.	B312-1
Component Layout		• A motor and a sensor to move the Paper Exit Guide Plate have been added. • A motor and a junction gate solenoid for the Pre-stack function have been added.	B312-4 to B312-9
Paper feed	Pre-stack function	The pre-stack tray and a junction gate have been added to increase the productivity when using A4, LT and B5 sideways. The pre-stack tray holds the first paper of next job until the stapling for the present job is finished and sends it to the staple tray together with the second paper.	B312-11
Feed-out Mechanism	Number of stoppers	There are 2 stack stoppers to increase the productivity of when a small number of papers are stapled. (A229: 1 stopper)	B312-15
	Shift Tray Exit Plate	The Shift Tray Exit Plate has become a Open/Close type because of the following reasons: • To reduce a noise generated when a stapled set of papers hits the paper exit guide plate. • To feed a stapled set of papers out more smoothly. • A motor and a sensor for this function have been added to control the movement of the plate.	B312-15
Jam Conditions		• Entrance sensor ON check: 2 s (A229: 450 ms) • *Entrance sensor OFF check: 850 ms (A229: 1325ms) • Upper tray exit sensor ON check: 1,050 ms (A229: 1,630 ms) • *Upper tray exit sensor OFF check: 850 ms (A229: 1,325 ms) • Shift tray exit sensor ON check: 1,345 ms (A229: 2,090 ms) • *Shift tray exit sensor OFF check: 850 ms (A229: 1,325 ms) • Staple tray entrance sensor ON check: 2,405 ms (A229: 3,700 ms) • *Staple tray entrance sensor OFF check: 850 ms (A229: 1,325 ms) • Staple tray paper sensor OFF check: 466 pulses (A229: 250 pulses) The mark of * means the value in case of A4 sideways.	B312-20
Service Tables	DIP Switches	• DPS100 is not used any more. • DPS101-1,2,3,4 0,0,0,0: Default 1,1,1,0: Free run (one cycle)	B312-21

SECTION 8: OPTION – 1,000-SHEET FINISHER (TONEGAWA-B, "A763")

Section	Item	Description
Finisher	Paper Size	A3 to A5, DLT to LT
	Output Tray	Proof tray, Shift tray and Saddle stitching (Center stapling) tray
	Paper Weight	Proof tray: 64 to 80 g/m^2 , 17 to 21 lb Shift tray: 64 to 128 g/m^2 , 17 to 34 lb Saddle stitching tray: 64 to 128 g/m^2 , 17 to 34 lb
	Paper Capacity	Proof tray: A4/LT or smaller: 50 sheets Larger than A4/LT: 30 sheets Shift tray: A4/LT or smaller: 1,000 sheets (without staples) 750 sheets (with staples) Larger than A4/LT: 500 sheets (With/without staples)
	Staple Position	3 positions 1 staple (Front Slant or Rear Slant) 2 staples
	Stapler Capacity	A4/LT or smaller: 50 sheets (80 g/m^2, 20 lb) Larger than A4/LT: 30 sheets (80 g/m2, 20 lb)
	Stapler Replenishment	Cartridge (5,000 staples) Type H (5 cartridges/box)
	Paper Size for Stapling	1 staple: A3 to B5, DLT to LT 2 staples: A3 to A4/B5 sideways, DLT to LT sideways
	Power Source	24 Vdc (from copier)
	Power Consumption	55 W
	Weight	45 kg, 20.5 lb
	Dimension	689 x 582 x 1,047 mm, 27 x 23 x 41 inches
Saddle Stitching	Saddle Stitching	Folding in half with/without stapling
	Paper Size	A3 to A4 lengthwise, DLT to LT lengthwise
	Stapler Capacity	15 sheets (including a cover page)
	Paper Weight	64 to 80 g/m^2 , 17 to 21 lb (Cover page: up to 128 g/m^2, 34 lb)
	Tray Capacity	25 sets (Up to 5 sheets/set) 20 sets (Up to 10 sheets/set) 10 sets (Up to 15 sheets/set)
	Staple Position	2 staples (adjustable)
	Stapler Replenishment	Cartridge (2,000 staples) Type E (4 cartridges/box)
	Power Consumption	160 W