

# Toshiba 1550 Service Handbook

Plain paper copier paper feeding unit

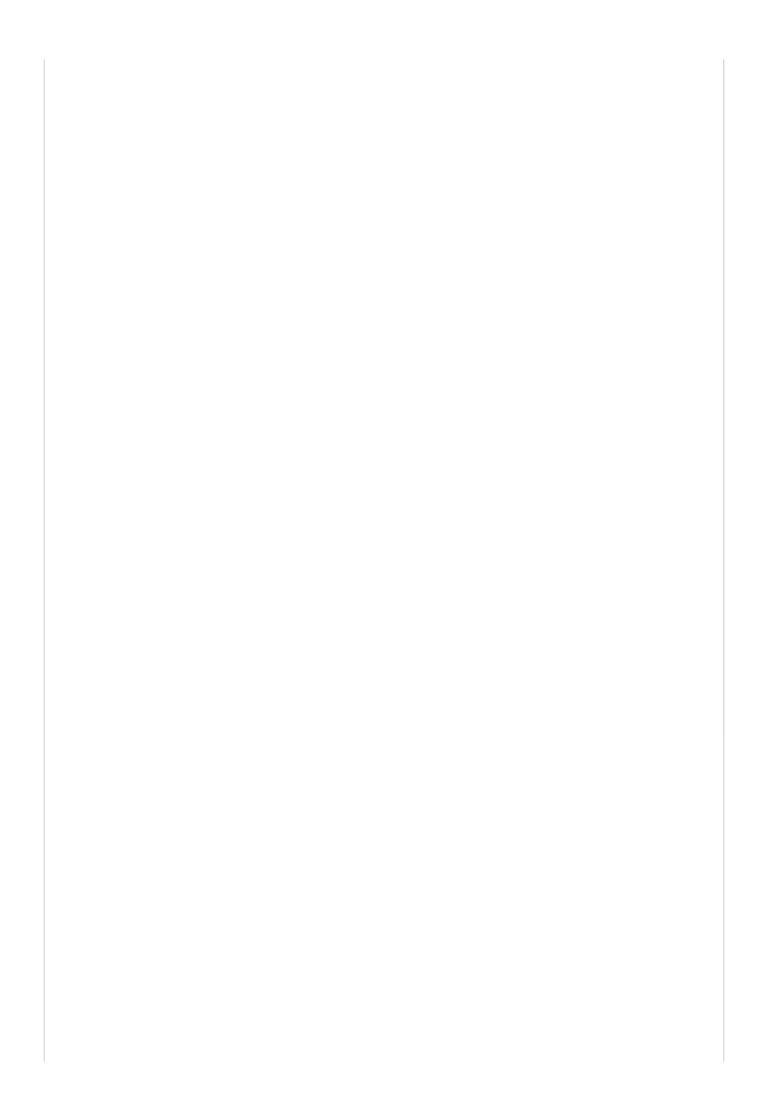
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# SERVICE HANDBOOK

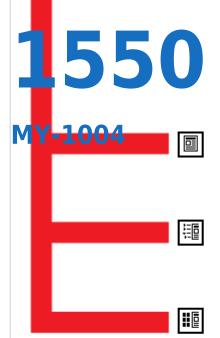
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## PL<mark>AI</mark>N PAPER COPIER PAPER FEEDING UNIT



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(236 pages)

### Summary of Contents for Toshiba 1550

<u>Page 1</u> Page marked by that bookmark. Click the Thumbnails and Page button to open the overview area and display thumbnail images of each document page. Click a thumbnail to go to the page marked by that thumbnail. Copyright TOSHIBA CORPORATION 1995 ALL RIGHTS RESERVED...

Page 2 GENERAL PRECAUTIONS REGARDING THE INSTALLATION AND THE SERVICE OF THE 1550/MY-1004 1. Transportation/Installation • When transporting/installing the copier, using two persons, be sure to use the positions as indi- cated below. The copier is fairly heavy and weighs approximately 35 kg (76.8 lb), therefore pay full attention when handling it.

<u>Page 3</u> 4. Main Service Parts for Safety • The thermofuse, thermistor, fuse, breaker and door switch, etc. are particularly important for safety. Be sure to handle/install them properly. 5. Notice Labels • Be sure to check the rating plate and the notice labels such as "Unplug the power cord during service", "Hot area", etc.

### Page 4: Adjustment Items

Misfeeding in the ADF original feeding section Midfeeding in the ADF original transport section Misfeeding in the ADF original exiting section 2 in 1 (2nd-original misfeeding in the feeding section) Oct. 1995 © TOSHIBA CORP. 1 - 1 1550 ADJUSTMENT...

<u>Page 5</u> (9) Communication related service call Error code Content Remarks Abnormal communication between the sorter and the main CPU Abnormal communication between ADF and the main CPU 1550 ADJUSTMENT 1 - 2 Oct. 1995 © TOSHIBA CORP. July 1996 ®...

Page 6 Home sensor error Copy-removal sensor error (12) Service call for other abnormalities Error code Content Remarks Faulty optical system initialization in The content is similar to C21 error. special modes (CH, AJ). Oct. 1995 © TOSHIBA CORP. 1 - 3 1550 ADJUSTMENT...

Page 7 • Test mode (03 or 04) : For this mode, refer to the "Input/Output Check" on page 1-6. • Adjustment mode (05) : For this mode, refer to the "Adjustment Mode" on page 1-9. 1550 ADJUSTMENT 1 - 4 Oct. 1995 © TOSHIBA CORP.

Page 8 All control-panel Test mode Warming up Aging Adjustment mode Setting mode LEDs ON "P" "C" "09" "09" "09" "06" Temporary stop Stand-by "05" "P" : Press PRINT. "C" : Press CLEAR/STOP. Oct. 1995 © TOSHIBA CORP. 1 - 5 1550 ADJUSTMENT...

Page 10 Sorter transport motor Sorter bin motor Sorter aging without paper At 1st "P" key press, starts and goes off at 2nd press. \*1: Scanning motor rotates at the preset reproduction ratio. Oct. 1995 © TOSHIBA CORP. 1 - 7 1550 ADJUSTMENT...

Page 11 03/04 Test mode standby state Operation Code Print (one direction) Power supply Warm up Group 3 03/04 Test mode standby state Operation Code Print Print (ON) Power supply Warm up 1550 ADJUSTMENT 1 - 8 Oct. 1995 © TOSHIBA CORP.

Page 12 But the Eraser LED timing adjustment 200% 0~15 image position relative to the paper does not change. (with Eraser LED timing adjustment original surface as reference) Oct. 1995 © TOSHIBA CORP. 1 - 9 1550 ADJUSTMENT...

<u>Page 13</u> \*1: The initial value signifies the value set by the NV-RAM initialization program and not the value set at the time of shipping from the factory. 1550 ADJUSTMENT 1 - 10  $^{\circ}$  Oct. 1995  $^{\circ}$  TOSHIBA CORP. July 1996...

Page 14 \*3 0 Automatic auto-exposure adjustment PRINT Power Clear (Possible only after the automatic adjustment is completed.) ADF EEROM initialization ADF Aligning roller PRINT Power automatic adjustment Ends 2 Clear sec. later. Oct. 1995 © TOSHIBA CORP. 1 - 11 1550 ADJUSTMENT...

Page 15 0: Single count; 1: Double count Bypass auto start 0: Manual start; 1: Auto start 0: Non-sort; Sorter priority selection 1, 2: Sort; 3: Group 0: OFF Pre-run ON/OFF 0~15 1~15: N x10 sec. 1550 ADJUSTMENT 1 - 12 Oct. 1995 © TOSHIBA CORP.

Page 16 0~999,999 Other than 0: When set value < code 79, PM call occurs. Current PM counter value 0~999,999 <Procedure> Setting or Code PRINT modifying INTERRUPT Power the value Clear Memorize Oct. 1995 © TOSHIBA CORP. 1 - 13 1550 ADJUSTMENT...

Page 17 C44 "CALL SERVICE" symbol will flash immediately, and the value of the setting mode code 89 depends on the conditions present at the time of the occurrence. 1550 ADJUSTMENT 1 - 14 ® Oct. 1995 © TOSHIBA CORP. July 1996...

Page 18 Hook (feed side) Front side wire fixture (Marking "F") Rear side wire fixture (Marking "R") Spherical terminal turns turns turns Shaft closely fit closely

Page 19 Also, always adjust the positions of the carriage 1 and 2 after finishing the tension adjustment. Carriage drive wire Hook Adjustment screw (Deflect it by (12.8) (14.8) 2 mm) (Before) (After) Wire tension bracket 1550 ADJUSTMENT 1 - 16 Oct. 1995 © TOSHIBA CORP.

Page 20 (two for each) touch the inside surface of the frame at the same time. Carriage 1 Oct. 1995 © TOSHIBA CORP. 1 - 17 1550 ADJUSTMENT...

<u>Page 21</u> 3 in the direction of the arrow. (When the front side is darker) As a result of the above adjustment, there is a possibility that under-exposure or over-exposure may occur; make exposure adjustment if necessary. 1550 ADJUSTMENT 1 - 18 Oct. 1995 © TOSHIBA CORP.

<u>Page 22</u> Adjust the original scale in the direction of the ar- row (A). Slanting as in B: Adjust the original scale in the direction of the ar- row (A). Oct. 1995 © TOSHIBA CORP. 1 - 19 1550 ADJUSTMENT...

Page 23 In the case of A: Rotate the adjustment screw in the direction of tightening (clockwise). In the case of B: Rotate the adjustment screw in the direction of loosening (counterclockwise). 1550 ADJUSTMENT 1 - 20 Oct. 1995 © TOSHIBA CORP.

<u>Page 24</u> In the case of C: Rotate the adjustment screw in the direction of tightening (clockwise). In the case of D: Rotate the adjustment screw in the direction of loosening (counterclockwise.) Oct. 1995 © TOSHIBA CORP. July 1996 1 - 21 ® 1550 ADJUSTMENT...

Page 25 (1) Make an actual-sized copy and check for the correct focus and lateral reproduction ratio; if adjust- ment is necessary, re-enter adjustment data as described below: a If the focus is inadequate and lateral reproduction ratio is smaller: Enter a smaller mirror-position value (code 61). 1550 ADJUSTMENT 1 - 22 Oct. 1995 © TOSHIBA CORP.

Page 26 Adjustment of Lateral Misplacement of the Lens Unit The lens unit has adjustable mechanism. However, as the adjustment is performed at the time of shipping from the factory, no further adjustment is needed. Oct. 1995 © TOSHIBA CORP. July 1996 1 - 23 1550 ADJUSTMENT...

Page 27 3. As adjustment of 154%, 50% and 200% manual exposure has already been performed, readjustment is not required. However, if individual adjustment is requested by the user, conduct the relevant adjustment in accordance with procedure (4), described later. 1550 ADJUSTMENT 1 - 24 Oct. 1995 © TOSHIBA CORP.

Page 28 Press the "Interrupt" key to store the value. Press the "Energy saver" key and make a test copy. If the image density of the test copy is not satisfactory, repeat operations 4-1 through 4-4. Oct. 1995 © TOSHIBA CORP. 1 - 25 1550 ADJUSTMENT...

Page 29 Adjustment code sequence ratio 100% 154% Manual exposure center 200% 100% 154% Automatic exposure 100% Light (max.) 100 % or appropriate ratio Dark (min.) 100% 154% Manual photo exposure 200% 1550 ADJUSTMENT 1 - 26 Oct. 1995 © TOSHIBA CORP.

Page 30 Press the "Interrupt" key and store the numerical value in the memory. Press the "Energy saver" key and make a test copy. If the image density of the test copy is not satisfactory, repeat operations 4-1 through 4-4. Oct. 1995 © TOSHIBA CORP. 1 - 27 1550 ADJUSTMENT...

Page 31 Press the "Interrupt" key and store the numerical value in the memory. Press the "Energy saver" key and make a test copy. If the image density of the test copy is not satisfactory, repeat operations 7-1 through 7-4. 1550 ADJUSTMENT 1 - 28 Oct. 1995 © TOSHIBA CORP.

Page 32 12-3 memory. Press the "Energy saver" key and make a test copy. 12-4 If the image density of the test copy is not satisfactory, repeat 12-5 operations 12-1 through 12-4. Oct. 1995

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Page 33 13-3 memory. Press the "Energy saver" key and make a test copy. 13-4 If the image density of the test copy is not satisfactory, repeat 13-5 operations 13-1 through 13-4. 1550 ADJUSTMENT 1 - 30 Oct. 1995 © TOSHIBA CORP.

<u>Page 34</u> (WH) side to the (+) ter- minal of the digital tester, respectively. Push down the upper unit. (Be careful not to allow the jig's cord to be pinched). 3P connector For measuring the transfer/separation values Oct. 1995 © TOSHIBA CORP. 1 - 31 1550 ADJUSTMENT...

<u>Page 35</u> 10. Check voltage value using digital tester • Grid bias:  $-692 \pm 5 \vee (Black) \cdot Transfer: -586 \pm 20mV • Separation: AC514 \pm 21mV (effective value displayed) AC464 \pm 18mV (average value displayed) 1550 ADJUSTMENT 1 - 32 Oct. 1995 © TOSHIBA CORP.$ 

<u>Page 36</u> Note: When voiding occurs on a halftone copy, reduce the separation output. When deficiency in separation from the drum occurs, or the user uses thin paper frequently, in- crease the separation output. Be careful to avoid over-increasing or over-decreasing separation output. Oct. 1995 © TOSHIBA CORP. 1 - 33 1550 ADJUSTMENT...

<u>Page 37</u> Note: If an overall misty effect is observed, even though exposure is sufficient, increase bias output through VR81 (Bias). However, when bias output is over-increased, the image contrast declines, causing a generation of bias leakage, and the carrier tends to stick to the drum easily. 1550 ADJUSTMENT 1 - 34 Oct. 1995 © TOSHIBA CORP.

Page 38 However, whenever the magnetic roller is re- placed, the adjustment of the poleposition height (H) shall be made first. Oct. 1995 © TOSHIBA CORP. 1 - 35 1550 ADJUSTMENT...

Page 39 4. After reinstalling the top cover, check that the rubber seal is placed over the side seals correctly. 1550 ADJUSTMENT 1 - 36 Oct. 1995 © TOSHIBA CORP. July 1996 ®...

Page 40 <Procedure> (Code "0" in the 05 adjustment mode) Power Print (Example) Approx. 3 minutes later (Example) If the value is not 24, make adjustment with zoom keys. INTERRUPT Install the toner cartridge. Oct. 1995 © TOSHIBA CORP. 1 - 37 1550 ADJUSTMENT...

Page 41 <Procedure> (Use codes 82/89/81/83/80 in the test mode "05") INTERRUPT PRINT Power (New set value) (Cassette) (Current value) ENERGY SAVER Test copy Code # Copy size A3(LD) Cassette A4-R(LT-R) A4(LT) 1550 ADJUSTMENT 1 - 38 ® Oct. 1995 © TOSHIBA CORP. July 1996...

Page 42 <Procedure> (Use the appropriate codes in the "05" test mode.) Example: Adjustment for the cassette (100%) Test copy for checking ENERGY SAVER the lead edge position Power (Example) PRINT Oct. 1995 © TOSHIBA CORP. July 1996 1 - 39 ® 1550 ADJUSTMENT...

Page 43 When ID codes are registered, copies are classified according to each ID code. To make copies, a registered ID code must be entered using numeric keys. <Preparation for using the access control mode> PRINT INTERRUPT Power OFF Power 1550 ADJUSTMENT 1 - 40 ® Oct. 1995 © TOSHIBA CORP. July 1996...

Page 44 ZOOM UP key Input new Input an PRINT counter Lower 3 figures ID code Upper 3 figures value Power displayed displayed Input new ENERGY SAVER counter value Oct. 1995 © TOSHIBA CORP. 1 - 41 ® 1550 ADJUSTMENT July 1996...

Page 45 B. Manual exposure adjustment 100% (AJ1) (1) Press the auto-exposure key to make the center LED of the manual exposure to come on. (2) Steps (2)-(4) are same as for the auto exposure adjustment. Flashing 1550 ADJUSTMENT 1 - 42 Oct. 1995 © TOSHIBA CORP.

Page 46 (2) While pressing the PHOTO key, press the ZOOM UP (or ZOOM DOWN) key, and the light MAX (or dark MAX) LED flashes. (3) Steps (3)-(4) are the same as for the auto exposure Flashing adjustment. Oct. 1995 © TOSHIBA CORP. 1 - 43 1550 ADJUSTMENT...

Page 47 Inspector Cleaning with soft (SI) Silicone oil ) Replace in event of pad, cloth, or cleaner (M) Molytherm deformation or Remarks (vacuum cleaner) (W) White grease (Molycoat)

other damage Oct. 1995 © TOSHIBA CORP. 2 - 1 1550 PERIODICAL MAINTENANCE...

Page 48 42 Charger wire Use sandpaper as 43 Terminal contact required ^º 44 Grid 45 Discharge lamp Developer 50 Entire unit unit ^º 51 Developer material 52 Rubber seal 1550 PERIODICAL MAINTENANCE 2 - 2 ® Oct. 1995 © TOSHIBA CORP. July 1996...

Page 49 76 Heat roller exit guide 77 Exit roller 78 Cleaning blade Drive 80 Drive gear (teeth) system 81 Stad of drive gear Sorter kit 82 Shaft and bushing Oct. 1995 © TOSHIBA CORP. July 1996 2 - 3 ® 1550 PERIODICAL MAINTENANCE...

Page 50 1550 PERIODICAL MAINTENANCE 2 - 4 Oct. 1995 © TOSHIBA CORP.

Page 51 July 1996 Oct. 1995 © TOSHIBA CORP. 2 - 5 ® 1550 PERIODICAL MAINTENANCE...

<u>Page 52</u> After disassembling the upper or lower aligning roller for cleaning, apply one drop of silicone oil to the inside of the bushing (sliding portion of the aligning roller). When reassembly has been accomplished, rotate the roller to facilitate the spreading of the oil. 1550 PERIODICAL MAINTENANCE 2 - 6 ® Oct. 1995 © TOSHIBA CORP. July 1996...

Page 53 This oiling is performed as a countermeasure to abnormal noise. Oiling to the shaft (Silicone oil) Oiling to the internal surface of the bushing (Silicone oil) Oct. 1995 © TOSHIBA CORP. July 1996 2 - 7 ® 1550 PERIODICAL MAINTENANCE...

Page 54 P20, I5 Cleaning felt roller PS-SR1550H P19, I12 \* Numbers correspond with those in the PERIODIC INSPECTION CHECK LIST. \*\* Refer to SERVICE PARTS LIST ED-1550. Jig List Door switch jig \*\*P100, I1 \*\* Refer to SERVICE PARTS LIST ED-1550.

### Page 55: Precautions For Storing And Handling Supplies

3. PRECAUTIONS FOR STORING AND HANDLING SUPPLIES Precautions for Storing Toshiba Supplies A. Toner and Developer Toner and developer should be stored in a place where the ambient temperature is below 35°C (95°F) and should also be protected against direct sunlight during transportation.

Page 56 The cleaning felt roller will be gradually degraded due to subjection to the heat from the heat roller over a long period of time; therefore, replace it preferably after about 60,000 copies have been made. 1550 SUPPLIES 3 - 2 Oct. 1995 © TOSHIBA CORP.

Page 57 Note: Be careful not to rub against the Teflon-coated surface with your fingernails or hard objects because it is easily damaged. Do not use silicone oil on the upper heat roller. Oct. 1995 © TOSHIBA CORP. 3 - 3 1550 SUPPLIES...

#### Page 58: Troubleshooting

Check visually if LNS-SW and MRR-SW can clear the bracket. Check for disconnection or short circuiting around pins J80, J81, J11, J51, J52, J4. Issue the TEST MODE CH command again and visually check for faulty conditions. Oct. 1995 © TOSHIBA CORP. 4 - 1 1550 TROUBLESHOOTING...

Page 59 Check if the carriage is getting caught somewhere. The carriage moves smoothly: Check if one or more of pins J11-12~17 are discon- nected or short-circuiting. Also check for disconnection or short-circuiting around IC7, J11-12~17. 1550 TROUBLESHOOTING 4 - 2 Oct. 1995 © TOSHIBA CORP.

Page 60 Check for disconnection or short-circuiting around pins 18 through 22 of J11 and J82. MMR-MTR Check for disconnection or short-circuiting around pins 1 through 5 of J11 and J81, and J79. Oct. 1995 © TOSHIBA CORP. 4 - 3 1550 TROUBLESHOOTING...

Page 61 YES: Check if there is any terminal of the heater pulled off, or whether there is a discon- nection or pulled-out connector in har- nesses on PS-ACC. Check the next question (Q2). 1550 TROUBLESHOOTING 4 - 4 Oct. 1995 © TOSHIBA CORP.

Page 62 Replace the SSR and check again. Move the connectors and harnesses of J7 and the relay, and check that the voltage displayed on the tester does not drop intermittently. Oct. 1995

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<u>Page 63</u> Check that the main motor makes no unusual noise when it rotates. Check for disconnection or short-circuiting around main motor and J10-4, R69, 105, IC10- 55 on PWA-LGC, and the harness that runs from J10 to main motor. 1550 TROUBLESHOOTING 4 - 6 Oct. 1995 © TOSHIBA CORP.

## This manual is also suitable for:

My-1004