RICOH   **T**echnical **B**ulletin

Reissued:01-Nov-06

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139001a

RTB Reissue

The items in bold italics have been corrected.

Subject: Engine firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Product Safety	☐ Other ( )	

This RTB has been issued to announce the firmware release information for the Model AR-P2 Engine board.

Version	Program No.	Effective Date
20501700	**G1395960A**	**January 2006 production**
20501300	G1395960	1st mass production

Version	Symptom Corrected
20501700	**Symptom corrected:** **The image density is low when images with a high coverage are printed continuously.** **Other changes:** **The timing for when the toner is supplied was changed.**
20501300	1st mass production

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139002

Subject: Controller (Net File) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Product Safety	☐ Other ( )	

This RTB has been issued to announce the printer firmware (Net File) release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
1.00	G1395934	1st mass production

Version	Title	Symptom Corrected
1.00		1st mass production

Reissued:22-Dec-06

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139003a

RTB Reissue
The items in **bold italics** were added.

Subject: Controller (Printer) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	

This RTB has been issued to announce the printer firmware release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
1.03	*G1395941C*	*November 2006 production*
1.02	G1395941B	1st mass production

Version	Title	Symptom Corrected
1.03		*1. The Summary Report can be printed out by turning ON the main power switch while holding down the Enter key.* *2. An RPCS job that contains a lot of graphic/image objects might be canceled with an "Insufficient Memory" error.* *3. A large quantity of RPCS jobs with different Print Quality settings might cause an "Insufficient Memory" error or the device to stall.* *4. Instead of incrementing the generic user "other", the counter of a random user might be incremented using List / Test Print. This only happens if User Authentication is disabled.* *5. The device might stall if it receives a PCL XL job containing an image. Only images created by specific graphics applications such as Route66 will trigger the problem.*
1.02		1st mass production

Reissued:29-Jun-06

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139004a

RTB Reissue
The items in bold italics have been corrected.

Subject: Security module (DESS) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Product Safety	☐ Other ( )	

This RTB has been issued to announce the Security module (DESS) firmware release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
3.07	*G1396097A*	*July 2006 production*
3.06A.1	G1396097	1st mass production

Version	Symptom Corrected
3.07	*Fixed : The SSL/TLS rollback vulnerability. (TechMail#TS060225）.*
3.06A.1	1st mass production

Reissued:27-Dec-06

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139005a

RTB Reissue

The items in bold italics have been added.

Subject: Controller (System) firmware release note for AR-P2		Prepared by: K. Moriizumi	
From: 1st Tech. Support Sec. Service Support Dept.			
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☒ Other ( )	☐ Action required ☐ Service manual revision ☐ Retrofit information

This RTB has been issued to announce the system firmware release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
1.03	*G1395910C*	*November 2006 production*
1.01	G1395910B	1st mass production

Version	Title	Symptom Corrected
1.03		*1. SC819 occurs if the power is turned OFF and ON during a remote firmware update (RFU).* *2. Communication between RC Gate and the device works properly.* *3. If multiple jobs are submitted, the first page of each will be printed slowly.*
1.01		1st mass production

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139006

Subject: Controller (NIB) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Product Safety	☐ Other ( )	

This RTB has been issued to announce the printer firmware (NIB) release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
4.17	G1395932	1st mass production

Version	Title	Symptom Corrected
4.17		1st mass production

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139007

Subject: Controller (WebSystem) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Product Safety	☐ Other ( )	

This RTB has been issued to announce the printer firmware (WebSystem) release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
1.02	G1395933A	1st mass production

Version	Title	Symptom Corrected
1.02		1st mass production

RICOH

Reissued: 22-Mar-07

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139003b

RTB Reissue

The items in **bold italics** have been added.

Subject: Controller (Printer) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other ( )	

This RTB has been issued to announce the printer firmware release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
1.04	**G1395941C_2**	**March 2007 production**
1.03	G1395941C	November 2006 production
1.02	G1395941B	1st mass production

Version	Title	Symptom Corrected
1.04		**Symptom corrected:** 1. **PCL data might be printed as garbage characters after several hundred pages of PCL data are printed without a power-off. (Techmail#TS060753).** 2. **PCL jobs that include separator pages might be printed as garbage characters (FPR#RC06040009/RC0610007).**
1.03		1. The Summary Report can be printed out by turning ON the main power switch while holding down the Enter key. 2. An RPCS job that contains a lot of graphic/image objects might be canceled with an "Insufficient Memory" error. 3. A large quantity of RPCS jobs with different Print Quality settings might cause an "Insufficient Memory" error or the device to stall. 4. Instead of incrementing the generic user "other", the counter of a random user might be incremented using List / Test Print. This only happens if User Authentication is disabled. 5. The device might stall if it receives a PCL XL job containing an image. Only images created by specific graphics applications such as Route66 will trigger the problem.
1.02		1st mass production

Model: Model AR-P2		Date: 10-Apr-08	No.: RG139008
Subject: Black toner dropping		Prepared by: K. Moriizumi	
From: 1st Tech. Support Sec. Service Support Dept.			
Classification:	☒ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☐ Action required ☐ Service manual revision ☐ Retrofit information

SYMPTOM

Black spots appear on the printout after the black PCU is replaced.

CAUSE

The toner seals are deformed during the shipping process. The deformed toner seals cannot return to their original shape in low-temperature environments. And as a result, some toner leaks out of the black PCU.

SOLUTION

If the symptom is reported, replace the PC shutter seal and PC shutter cover of the black PCU with the following new service parts.
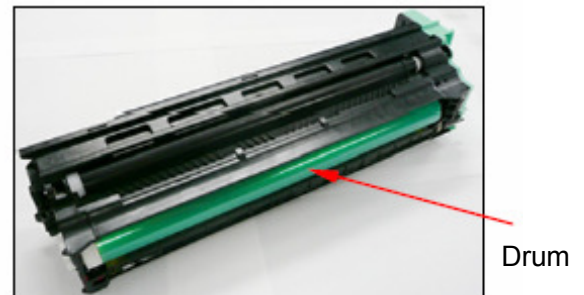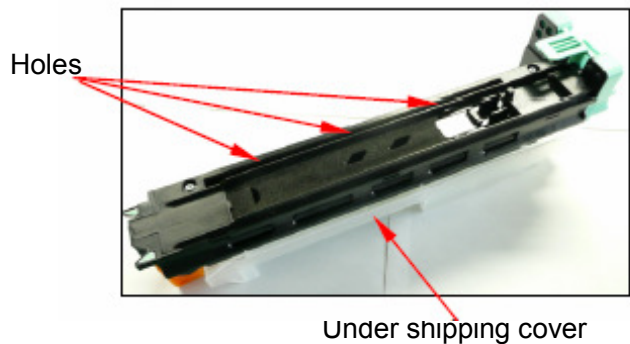
See the procedure below.

PC Shutter Seal	P/N **G1392301**	(Model AR-**P2**)
	P/N **G1392303**	(Model AR-**P1/P1e**)
PC Shutter Cover	P/N **G1392302**	(Model AR-**P2**)
	P/N **G1392304**	(Model AR-**P1/P1e**)

Note: See MBs: MG081015 and MG139005

Model: Model AR-P2	Date: 10-Apr-08	No.: RG139008

Procedure

BEFORE BEGINNING:

1. Don't touch the drum on the underside of the unit. Attach a shipping cover to this area.

2. Don't expose the holes shown in the photo and drum to any light for more than 10 minutes.

3. Make sure no foreign material gets into the holes shown in the photo.

Holes

Under shipping cover

Drum

4. Close the toner shutter and keep it shut during the entire procedure.

OK: The toner shutter is closed.

NG: The toner shutter is open. Please slide the shutter.

MAIN PROCEDURE

1. If there is any toner near the toner supply hole, use a vacuum cleaner to remove this toner. If you don't have a vacuum cleaner, turn the handle slowly in the direction of the white arrow, as shown in the photo.
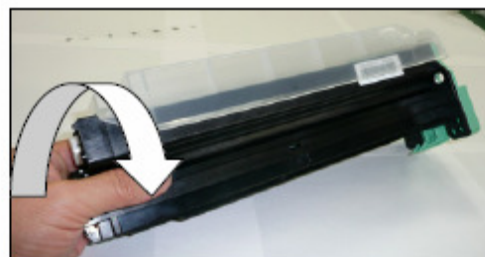
Remove
this toner

2. Lift up one side of the shutter, then lift the other side. Remove the shutter slowly, together with the plastic sheet.
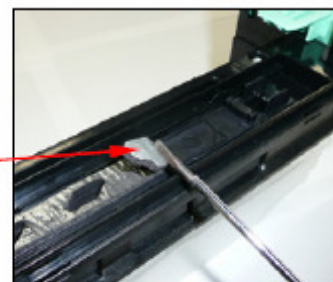
Lift up one side: Lift up the other side:

3. Lift up the edge of the PC shutter seal, together with the plastic sheet, using a small screwdriver. Remove the shutter seal.

Remove the shutter together
with the plastic sheet

Lift up the edge of the seal

4. Wipe off the toner with a dry cloth.
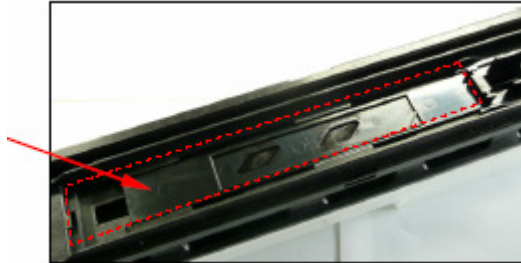
5. Attach the new PC shutter seal (see page 1 for P/N) to align the ribs of shutter.

Upper rib

Left rib

Under rib
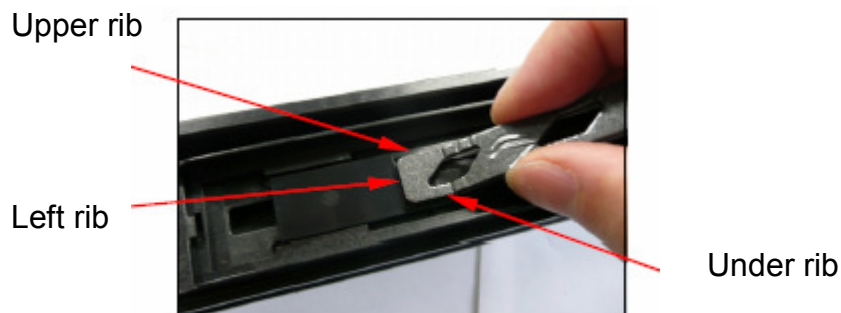
6. Attach the new shutter cover (see page 1 for P/N).

 Important (see the photos below):

- Align the left edge of the seal with the left edge of the depressed area **[A]**.
- Insert the edge of shutter cover under the hook of shutter **[B]**.
- Press the areas around the supply holes to securely attach the cover **[C]**.

[A]

[C]

[B]
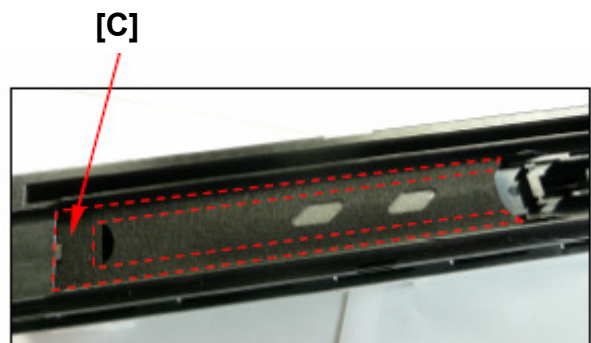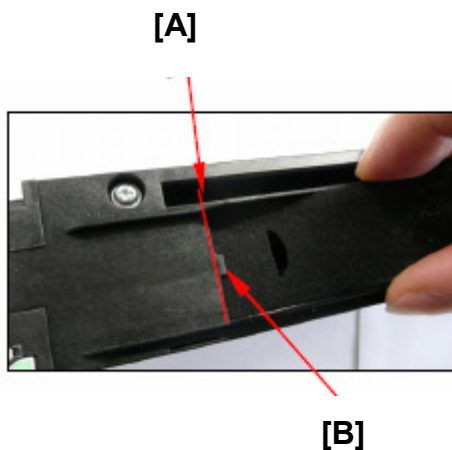
Model: Model AR-P2	Date: 26-Jan-06	No.: RG139003c

RTB Reissue
The items in **bold italics** have been added.

Subject: Controller (Printer) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other ( )	

This RTB has been issued to announce the printer firmware release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
1.05	**G1395941D**	**September 2008 production**
1.04	G1395941C_2	March 2007 production
1.03	G1395941C	November 2006 production
1.02	G1395941B	1st mass production

Version	Title	Symptom Corrected
1.05		**Other changes:** **The firmware was modified to support the new Fujitsu hard disk drive.**
1.04		Symptom corrected: 1. PCL data might be printed as garbage characters after several hundred pages of PCL data are printed without a power-off. (Techmail#TS060753) . 2. PCL jobs that include seperator pages might be printed as garbage characters (FPR#RC06040009/RC0610007).
1.03		1. The Summary Report can be printed out by turning ON the main power switch while holding down the Enter key. 2. An RPCS job that contains a lot of graphic/image objects might be canceled with an "Insufficient Memory" error. 3. A large quantity of RPCS jobs with different Print Quality settings might cause an "Insufficient Memory" error or the device to stall. 4. Instead of incrementing the generic user "other", the counter of a random user might be incremented using List / Test Print. This only happens if User Authentication is disabled. 5. The device might stall if it receives a PCL XL job containing an image. Only images created by specific graphics applications such as Route66 will trigger the problem.
1.02		1st mass production

Technical **B**ulletin

PAGE: 1/1

Model: Model AR-P2	Date: 26-Jan-06	No.: RG139005b

RTB Reissue
The items in bold italics have been added.

Subject: Controller (System) firmware release note for AR-P2	Prepared by: K. Moriizumi
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other ( )	

This RTB has been issued to announce the system firmware release information for the Model AR-P2 controller board.

Version	Program No.	Effective Date
1.04	*G1395910D*	*September 2008 production*
1.03	G1395910C	November 2006 production
1.01	G1395910B	1st mass production

Version	Title	Symptom Corrected
1.04		*Other changes:* *The firmware was modified to support the new Fujitsu hard disk drive.*
1.03		1. SC819 occurs if the power is turned OFF and ON during a remote firmware update (RFU). 2. Communication between RC Gate and the device works properly. 3. If multiple jobs are submitted, the first page of each will be printed slowly.
1.01		1st mass production

Reissued: 9-Oct-08

Model: Model AR-P2	Date: 10-Apl-08	No.: RG139008a

RTB Reissue

The items in **bold italics** have been corrected or added.

Subject: Black toner dropping	Prepared by: K. Moriizumi	
From: 1st Tech. Support Sec. Service Support Dept.		
Classification:	☒ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☐ Action required ☐ Service manual revision ☐ Retrofit information

SYMPTOM

Black spots appear on the printout after the black PCU is replaced.

CAUSE

The toner seals are deformed during the shipping process. The deformed toner seals cannot return to their original shape in low-temperature environments. And as a result, some toner leaks out of the black PCU.

SOLUTION

If the symptom is reported, replace the PC shutter seal and PC shutter cover of the black PCU with the following new service parts.

See the procedure below.

PC Shutter Seal	P/N **G1392301**	(Model AR-**P2**)
	P/N **G1392303**	(Model AR-**P1/P1e**)
PC Shutter Cover	P/N **G1392302**	(Model AR-**P2**)
	P/N **G1392304**	(Model AR-**P1/P1e**)

Note:

- See MBs: MG081015 and MG139005

- The shape of the shipping cover was also changed. See the cut-in S/N below.
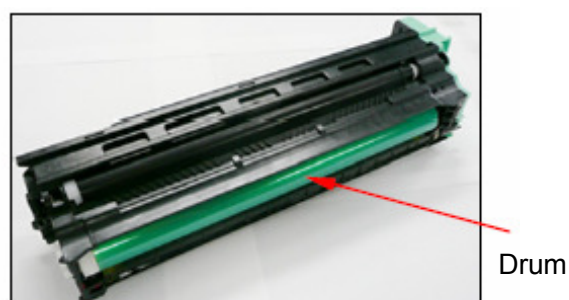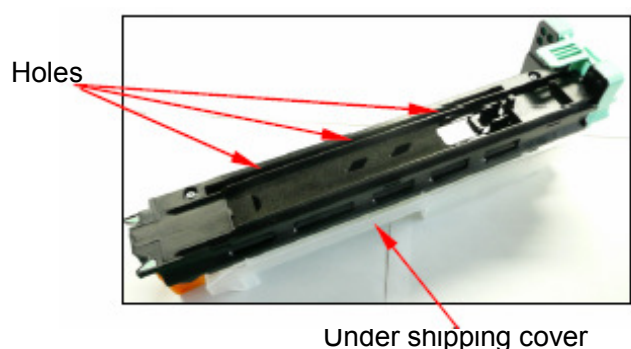
Model: Model AR-P2	Date: 10-Apl-08	No.: RG139008a

Procedure

BEFORE BEGINNING:

1. Don't touch the drum on the underside of the unit. Attach a shipping cover to this area.

2. Don't expose the holes shown in the photo and drum to any light for more than 10 minutes.

3. Make sure no foreign material gets into the holes shown in the photo.

Holes

Under shipping cover

Drum

4. Close the toner shutter and keep it shut during the entire procedure.

OK: The toner shutter is closed.   NG: The toner shutter is open. Please slide the shutter.

Model: Model AR-P2	Date: 10-Apl-08	No.: RG139008a

MAIN PROCEDURE

1. If there is any toner near the toner supply hole, use a vacuum cleaner to remove this toner. If you don't have a vacuum cleaner, turn the handle slowly in the direction of the white arrow, as shown in the photo.
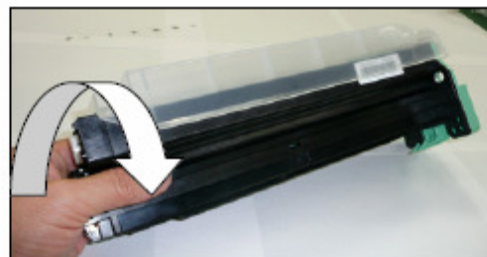
Remove
this toner

2. Lift up one side of the shutter, then lift the other side. Remove the shutter slowly, together with the plastic sheet.
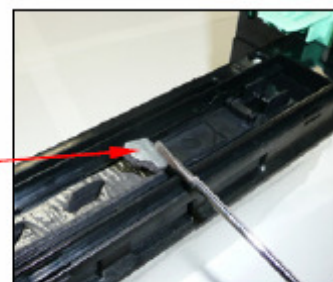
Lift up one side: Lift up the other side:

3. Lift up the edge of the PC shutter seal, together with the plastic sheet, using a small screwdriver. Remove the shutter seal.

Remove shutter together with plastic sheet
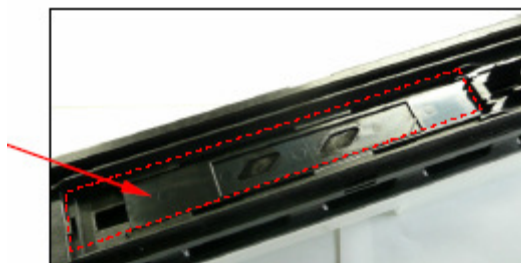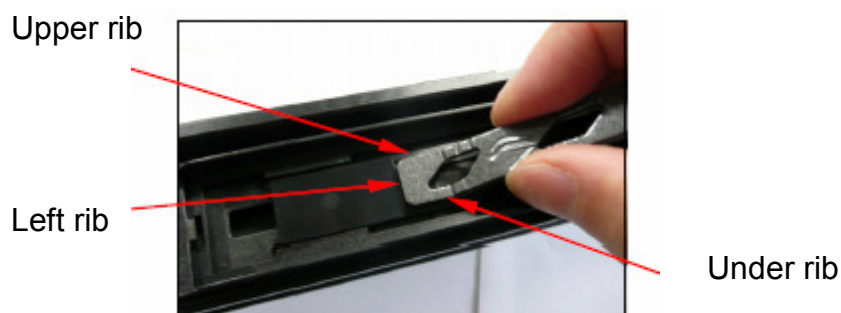
Lift up the edge of the seal

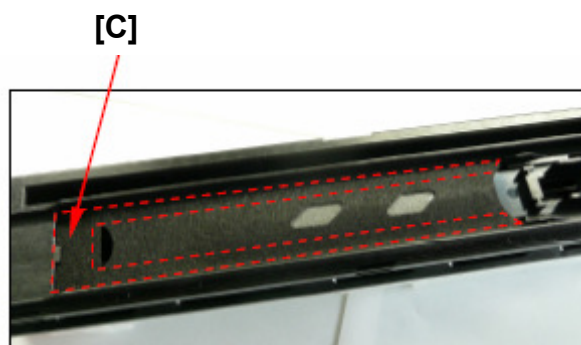| Model: Model AR-P2	Date: 10-Apl-08	No.: RG139008a

4. Wipe off the toner with a dry cloth.

5. Attach the new PC shutter seal (see page 1 for P/N) to align the ribs of shutter.

Upper rib

Left rib

Under rib

6. Attach the new shutter cover (see page 1 for P/N).

   Important (see the photos below):

   ● Align the left edge of the seal with the left edge of the depressed area **[A].**
   ● Insert the edge of shutter cover under the hook of the shutter **[B].**
   ● Press the areas around the supply holes to securely attach the cover **[C].**

[A]

[C]

[B]
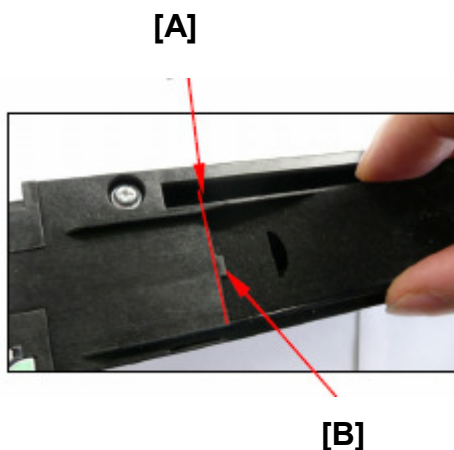
Cut-in Serial Numbers for the Shipping Cover

Model AR-P1/P1e

- Supply PCU -

Model Code	*EDP*	*Serial Number*
G20369	*402524*	*7LAXK33869*

Model AR-P2

- Main frame-

Model Code	*EDP*	*Serial Number*
G13917	*402434*	*Q4480101278*
G13951	*402436*	*Q4471200496*
G13927	*402435*	*Q4480100683*
G14927	*402439*	*Q4580400265*
G13922	*402437*	*Q4471201747*
G14922	*402440*	*Q4471200400*

- Supply PCU –

Model Code	*EDP*	*Serial Number*
G27517	*402448*	*7JBXC4684*

Reissued:29-Jun-09

Model: AR-P2	Date:30-Mar-09	No.: RG139009a

RTB Reissue

The items in **bold** were corrected or added.

Subject: Toner blasting		Prepared by: N.Yoshida
From: 2nd Tech Support Sec. Service Support Dept.		
Classification:	☒ Troubleshooting ☐ Part information ☐ Action required ☐ Mechanical ☐ Electrical ☐ Service manual revision ☐ Paper path ☐ Transmit/receive ☐ Retrofit information ☐ Product Safety ☐ Other ( )		

This RTB is also applied to model AP-P2.

SYMPTOM

Toner blasting appears just ahead of the image along the paper feed direction.

- Location of toner blasting -
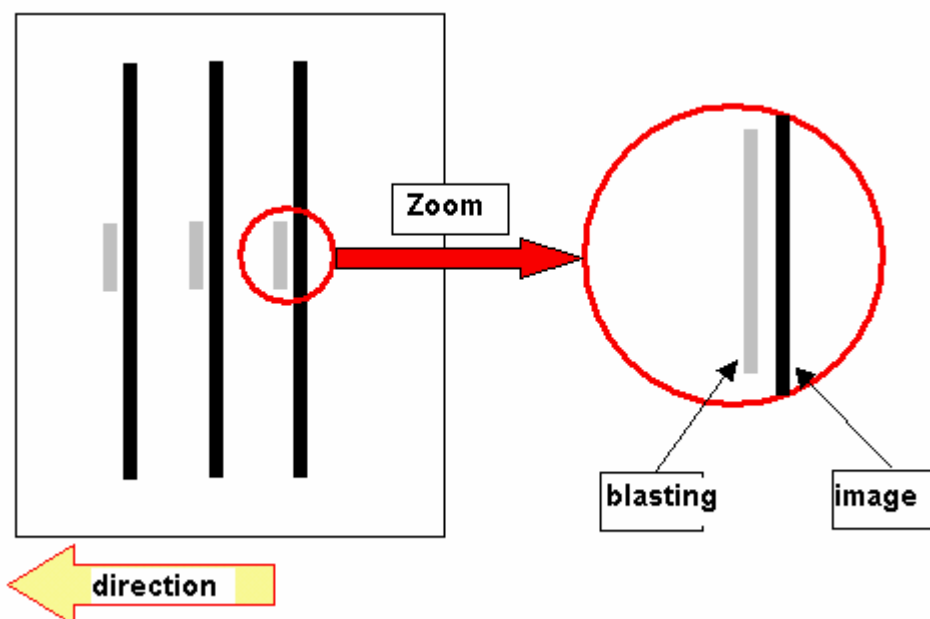
- Occurrence conditions -
- Occurs only with black and white printing
- Occurs mainly at the center of the image but sometimes at the side edges.

CAUSE

Related to paper transfer roller bias

Model: AR-P2	Date:30-Mar-09	No.: RG139009a

SOLUTION

1. Change the paper transfer roller bias.
SP 2-403-001 Plain:Bias Sep DC:Plain:1st
34 -> 50

NOTE: This will slightly increase the visibility of grainy images in solid image areas.
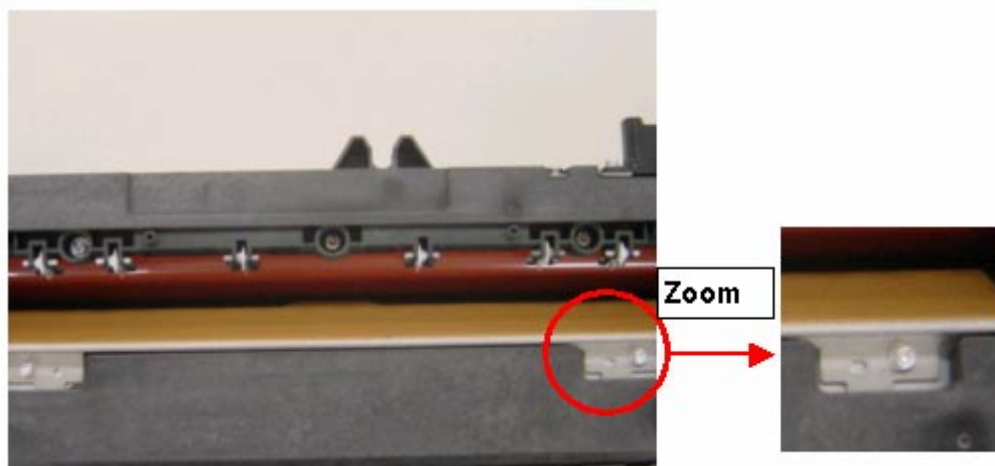
2. Change the position of the fusing guide plate.
 - Change the position of the screw shown below, and then move the guide plate toward the pressure roller.

After this screw position is changed, in some cases, mimizu ('earth worms', slight wrinkling) may occur with the first print made of the day.

- Before the position of the guide plate screw is changed -
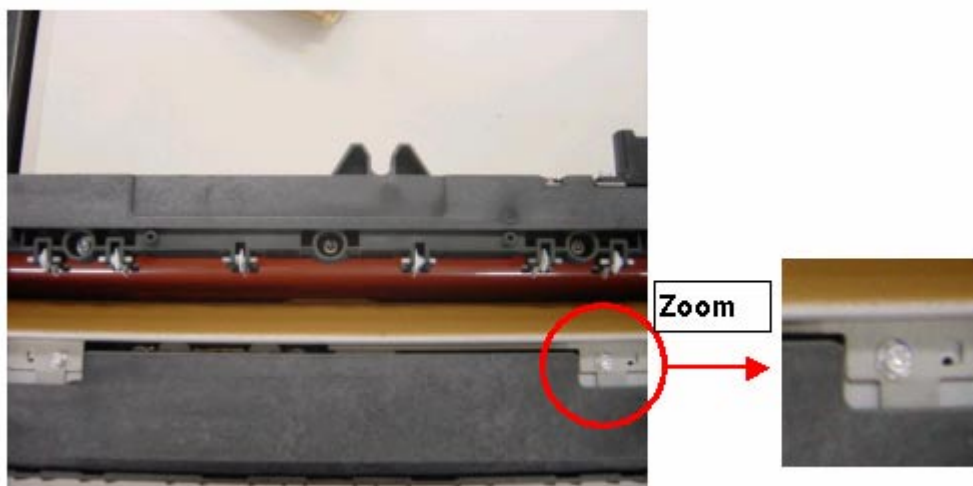
- After the position of the guide plate screw is changed -

| Model: AR-P2 | Date:30-Mar-09 | No.: RG139009a |

The position of the screw hole is shown below.