Reissued: 3-Mar-06

Model: Model L2a	Date: 9-Sep-04	No.: RH914001b

RTB Reissue

The items in bold italics have been added.

Subject: Firmware History			Prepared by: T. Shintani
From: 1st Technical Support Sec. Service Support Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

The detailed explanation of this Firmware change was added. Please see the following.

Part Number	Version	Production
H914109	***1.09***	***April '05 production***
H914107	1.07	July '04 production
H914106	1.06	First mass production

Descriptions of changes

Symptom Corrected, Other Changes	Version
1. Broadcasting does not work correctly when sending to a Group Dial that was created using the One-touch Keys. ***2. Sometimes, a Group Dial cannot be created using the One-touch Keys.*** ***3. The volume of the beeping sound for fax reception was reduced.*** ***4. The contrast of images scanned with the TWAIN driver was improved.***	**1.09**
1. Translation error (Swedish): "Off" and "On" were reversed. *Other changes:* *2. DTMF levels for China and Oceania changed to meet local regulations* *1. Optimized the timing for the "Toner Low" and "Toner Empty" conditions (threshold for toner dot counter was changed).*	1.07
Regular upgrade: Improved management of energy saver function.	1.06

Reissued: 3-Mar-06

Model: Model L2b	Date: 9-Sep-04	No.: RH914002b

RTB Reissue

The items in bold italics have been added.

Subject: Firmware History			Prepared by: T. Shintani
From: 1st Technical Support Sec. Service Support Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

The detailed explanation for this Firmware change was added. Please see the following.

Part Number	Version	Production
H915109	***1.09***	***April '05 production***
H915107	1.07	July '04 production
H915106	1.06	First mass production

Descriptions of changes

Symptom Corrected, Other Changes	Version
1. Broadcasting does not work correctly when sending to a Group Dial that was created using the One-touch Keys. ***2. Sometimes, a Group Dial cannot be created using the One-touch Keys.*** ***3. The volume of the beeping sound for fax reception was reduced.*** ***4. The contrast of images scanned with the TWAIN driver was improved.***	**1.09**
1. Translation error (Swedish): "Off" and "On" were reversed. *Other changes:* *2. DTMF levels for China and Oceania changed to meet local regulations* 3. *Optimized the timing for the "Toner Low" and "Toner Empty" conditions (threshold for toner dot counter was changed).*	1.07
Regular upgrade: Improved management of energy saver function.	1.06

Reissued: 16-Sep-04

Model: Model L2	Date: 9-Sep-04	No.: RH914003a

RTB Reissue

The items in bold italics have been added.

Subject: Firmware History			Prepared by: T. Shintani
From: 1st Technical Support Sec. Service Support Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

The detailed explanation for this firmware change was added. Please see the following.

Part Number	Version	Production
H916109	***1.09***	***July '04 production***
H916108	1.08	First mass production

Descriptions of changes

Symptom Corrected, Other Changes	Version
1. Modified the software so that a Speed Dial cannot be deleted if it is already programmed in a Forwarding job. ***Note: Deleting it caused an error with this function.*** ***Other changes:*** ***2. DTMF levels for China and Oceania changed to meet local regulations*** ***3. Optimized the timing for the "Toner Low" and "Toner Empty" conditions (the threshold for the toner dot counter was changed).*** ***4. Optimized the transfer voltage and fusing temperature for "Colored" paper to ensure good drum cleaning.***	***1.09***
Regular upgrade: Improved management of the energy saver function.	1.08

Model: Model L2c	Date: 19-Nov-04	No.: RH914004

Subject: Machine firmware updated for NCU change	Prepared by: T. Shintani
From: 1st Technical Support Sec. Service Support Dept.	

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

Background

As informed by MB H914004 and RTB H914005, the EU version of the NCU (LIU) has been modified to apply a unique regulation for South Africa from October 2004 production. Together with the NCU change, firmware has been updated as well, and it is necessary to set the [LIU Select] parameter to the correct setting, depending on the NCU used; old type (p/# H9169511) or new type (P/# H9169538).

Interchangeability between NCU and Firmware

There is no interchangeability for South Africa. Only the new NCU can be used on their products.
There is interchangeability for European countries other than South Africa. Both NCUs can be used on both the old and the new products.

A green round seal has been applied on the new NCU to easily distinguish the old or the new parts in the field.

Combination of NCU and Firmware

When replacing with the new NCU, firmware must be version 6.11 or later. From firmware v6.11, “LIU Select” (one of functions in “Data Setup” of Tech mode) has been added, to set the correct NCU type on firmware.

As shown in the System Data List below, you need to set the correct NCU type;

- EU&SA LIU: When the new NCU is installed.
- EU LIU: When the old NCU is installed.

LIU Select (EU only)	[EU&SA LIU/EU LIU]	EU&SA LIU
Firmware Version	: 6.11	
Engine Version	: 7.1.05	

< System data list >

Model: Model L2c	Date: 19-Nov-04	No.: RH914004

Action Required

For machines using the EU version of the NCU:

1. When you replace the NCU from the old to the new one, and when the firmware is v1.09 or older, update the firmware to v6.11 or later and then set the [LIU Select] parameter to “EU&SA LIU”.
2. When you update the firmware to v6.11 or later, and when the machine has used the old NCU, set the [LIU Select] parameter to “EU LIU”.
3. In any other cases, [LIU Select] has to be set to the correct setting
   → When the old NCU is used, set [LIU Select] to “EU LIU”.
   → When the new NCU is used, set [LIU Select] to “EU&SA LIU”.

Model: Model L2c	Date: 19-Nov-04	No.: RH914005

Subject: Firmware history	Prepared by: T. Shintani
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
	☐ Other ( )		

This is to inform you of the firmware history for Model L2c.

Part Number	Version	Production
H916611	***6.11***	***October '04 production***
H916109	1.09	Jury '04 production
H916108	1.08	First mass production

Descriptions of changes

Symptom Corrected, Other Changes	Version
1. "LIU select" has been added as one of functions in "Data Setup" of Tech Mode, to set in accordance with the NCU type; current NCU (old) or newly S. Africa regulation applied NCU (new). For details, refer to the MB MH914004 and RTB RH914004.	***6.11***
Symptoms corrected: *1. The dot counter number was changed for earlier indication.* *Other changes:* *1. Modification of Swedish language. (On and Off)* *2. You cannot delete the dial number used in transportation reserve.* *3. Modification for Ghost images in lower temperatures.*	*1.09*
Regular upgrade: Improved management of energy saver function.	1.08

Reissued: 6-Dec-04

Model: Model L2a	Date: 8-Nov-04	No.: RH914006a

RTB Reissue

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

Subject: Service manual Revision "Download procedure"			Prepared by: T.Shintani
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
	☐ Other ( )		

This RTB shows the new firmware update procedure for Model L2a. Please replace section 5.4 FIRMWARE DOWNLOAD with pg. 2-4 of this RTB.

Changes:

- The procedure for DOS mode was added, because firmware download on the **L2a** can **only be done in DOS mode**.
- Minor changes to section 5.4 FIRMWARE DOWNLOAD

Model: Model L2a	Date: 8-Nov-04	No.: RH914006a

5.4 FIRMWARE DOWNLOAD

5.4.1 DOWNLOAD PROCEDURE

There are three ways to update the firmware on the machine: RCP mode, DOS mode and Remote Machine Update mode. For RCP mode, connect the PC and machine with a USB or parallel cable. For DOS mode, connect the PC and machine with a USB cable. For Remote Machine Update mode, use a telecommunications line.

Important: Before you do the firmware update, make sure to print out the system data list in Tech mode. This is because the programmed data may be lost if an unexpected error occurs during the firmware download.

RCP (Remote Control Panel) Mode: For Models L2b and L2c

If you do the firmware update in RCP mode, connect the machine to the PC with a parallel cable or USB cable. The machine uses the RCP (Remote Control Panel) software to upgrade the firmware.

1. Connect PC and printer with parallel cable or USB cable.
2. Do RCP and set the Firmware update tab. The current firmware version and emulation version are shown.
3. Keep the firmware file on the PC, in a path near the root of C:, e.g. C:\TEMP. Use the “Browse” button to get the firmware file to update the machine.
4. Push the update button. The firmware file automatically goes to the printer. The printer is initialized when the update is finished. Make sure that these show on the LCD display when you download the new firmware:
   1) DATA RECEIVING (USB) / COPY/B FILE LPT1 (PARALELL)
   2) PC TO DRAM IS OK
   3) FLASH IS ERASING
   4) FLASH PROGRAMMING
   5) CHECKSUMMING
   6) DOWNLOAD OK
   7) Warming up Please wait…
5. Push the refresh icon. Then make sure that the version number shown agrees with the new firmware.
   Note: The country code will not change after you download the new firmware.
6. Print out the system data list in Tech mode, and then make sure the firmware version on the list is the new version.

Model: Model L2a	Date: 8-Nov-04	No.: RH914006a

DOS Mode: For Model L2a

If you do the firmware update in DOS mode, connect the machine to the PC with a USB cable (Note: You cannot use a parallel cable). In DOS mode, DOS commands are used to send the new firmware files from the PC to the machine.

1) Make sure the following files are saved under a root directory on the PC (e.g. "C:\").
   - down_com.bin
   - usblist2.exe
   - Udown.bat
   - Program file (e.g. H914107.bin)
2) Make sure you have the Driver and Utility for the ***Model L2b or Model L2c***. If you do not have it, download it from the ***website***.
3) Connect one end of the USB to the PC, and then connect the other end to the machine.
4) Do the following procedure.

PC	Machine	
	LCD Display	**Machine Status**
1. Print out the System Data List (Tech Mode) and the Phone Book. **Note:** This is necessary because the programmed data and settings are sometimes erased when the new firmware is installed.		
	2. Make sure that the machine is in standby mode (Ready condition). **Important:** Do not access "PROGRAM DOWNLOAD" in the "MAINTENANCE" menu. If you do, the firmware update may not work.	
3. At the command prompt, type: **udown H914107.bin** Then, press ENTER. →	"Program upgrade. Please wait…" is displayed.	The machine waits to receive the firmware files.
4. When the LCD displays "Continue this press any key," press ENTER. →	"Program upgrade. Please wait…."	The machine receives new firmware files.
The firmware is automatically updated.	"Warming up. Please wait."	The machine warms up to the Ready status.
	"Set the D / M / Y"	
5. Program the day, month and year.	"(D / M / Y)"	Returns to the Ready screen.

5) Print out the system data list in Tech mode, and then make sure the firmware version on the list is the new version.

Model: Model L2a	Date: 8-Nov-04	No.: RH914006a

Recovery Procedure for RCP and DOS Modes

If the firmware update is not successful, the machine will not operate correctly. If this happens, do the following procedure:

1. Turn the machine power OFF/ON.
2. Do the update procedure for RCP or DOS mode from Step 4 again.

Remote Machine Update Mode: For all models

In this mode, a fax machine with the most recent firmware sends it through the telecommunications network to one or more remote machines of the same type.

How to Update the Firmware by Remote Fax

1. Use a fax machine with the most recent firmware.
2. Select “Remote” in the flash upgrade of data setup menu in tech mode.
   Tech Mode → Data Setup → Flash Upgrade (☛ 5.2.3)
3. Put in the telephone number of the fax machine to upgrade. (You can upgrade several faxes at the same time). Put in the telephone number for each machine if you want to upgrade more than one machine.
4. Then push the enter button. This will send the firmware file to each fax machine. (It takes 10 or 15 minutes to send the file to each machine.)

CAUTION: 1) The sending and receiving fax machines must be the same model.
2) The sending fax must be set up in ECM mode. The receiving machine memory must be set to 100%.

Reissued: 19-Jul-06

Model: Model L2c	Date: 9-Sep-04	No.: RH914003b

RTB Reissue

The items in bold italics have been added.

Subject: Firmware History	Prepared by: T. Shintani
From: 1st Technical Support Sec. Service Support Dept.	

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

The detailed explanation for this Firmware change was added. Please see the following.

Part Number	Version	Production
H916614	***6.14***	***July '06 Production***
H916611	6.11	October '04 production
H916109	1.09	July '04 production
H916108	1.08	First mass production

Descriptions of changes

Symptom Corrected, Other Changes	Version
1. A communication error occurs when the Lakestar-2c sends to a PC Fax. ***2. A fax cannot be sent when Quick Dial(s) are used.*** ***3. The display language in User Mode changes to English after the Shading Test is done in Tech Mode, even if a different language was selected before.*** ***4. The values for Reduce/Enlarge, Darkness and Original Type do not return to default when the user performs a Memory Clear.***	***6.14***
1."LIU select" has been added as one of functions in "Data Setup" of Tech Mode, to set in accordance with the NCU type; current NCU (old) or newly S. Africa regulation applied NCU (new). For details, refer to the MB MH914004 and RTB RH914004.	***6.11***
1. Modified software so that a Speed Dial cannot be deleted if it is already programmed in Forward Job. Note: Deleting it caused an error with this function. Other changes: 2. DTMF levels for China and Oceania changed to meet local regulations 3. Optimized the timing for the "Toner Low" and "Toner Empty" conditions (threshold for toner dot counter was changed). 4. Optimized the transfer voltage and fusing temperature for "Colored" paper to ensure good drum cleaning.	1.09
Regular upgrade: Improved management of energy saver function.	1.08

Model: Model L2a/b/c	Date: 13-May-09	No.: RH914007

Subject: Sheet Guide Paper (Paper Feed)	Prepared by: Y. Gaman
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 ( )	☐ Tier 2

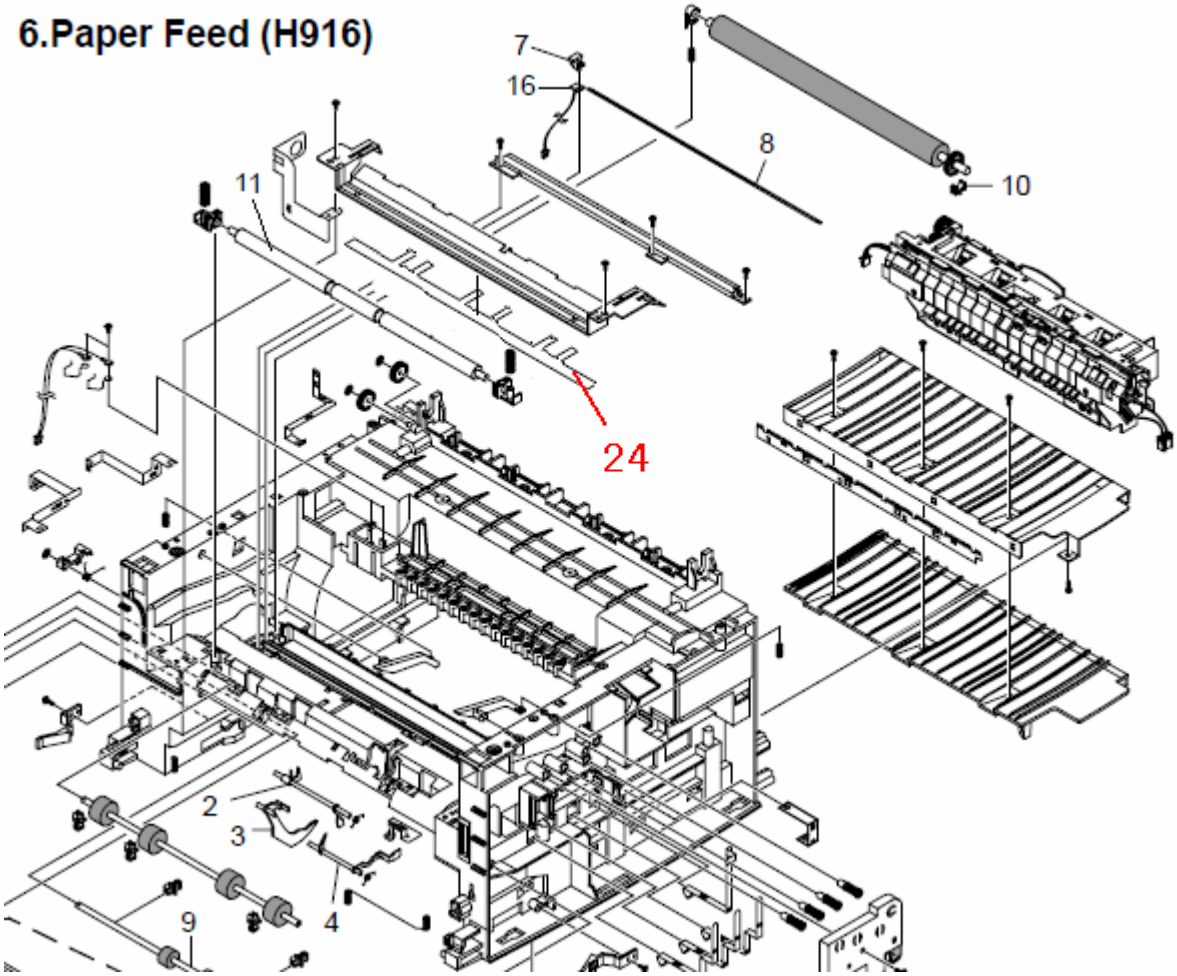
Change: This part was added.
Reason: Requests from the field.

H914 / H915 (Model L2a/b)

NEW Part	Description	Q'ty	Int	Page	Index	Note
H9169687	Sheet Guide Paper	1	-	11	24	

H916 (Model L2c)

NEW Part	Description	Q'ty	Int	Page	Index	Note
H9169687	Sheet Guide Paper	1	-	13	24	



RICOH **Technical Bulletin**

Model: Model L2c	Date: 12-Jun-09	No.: RH914008

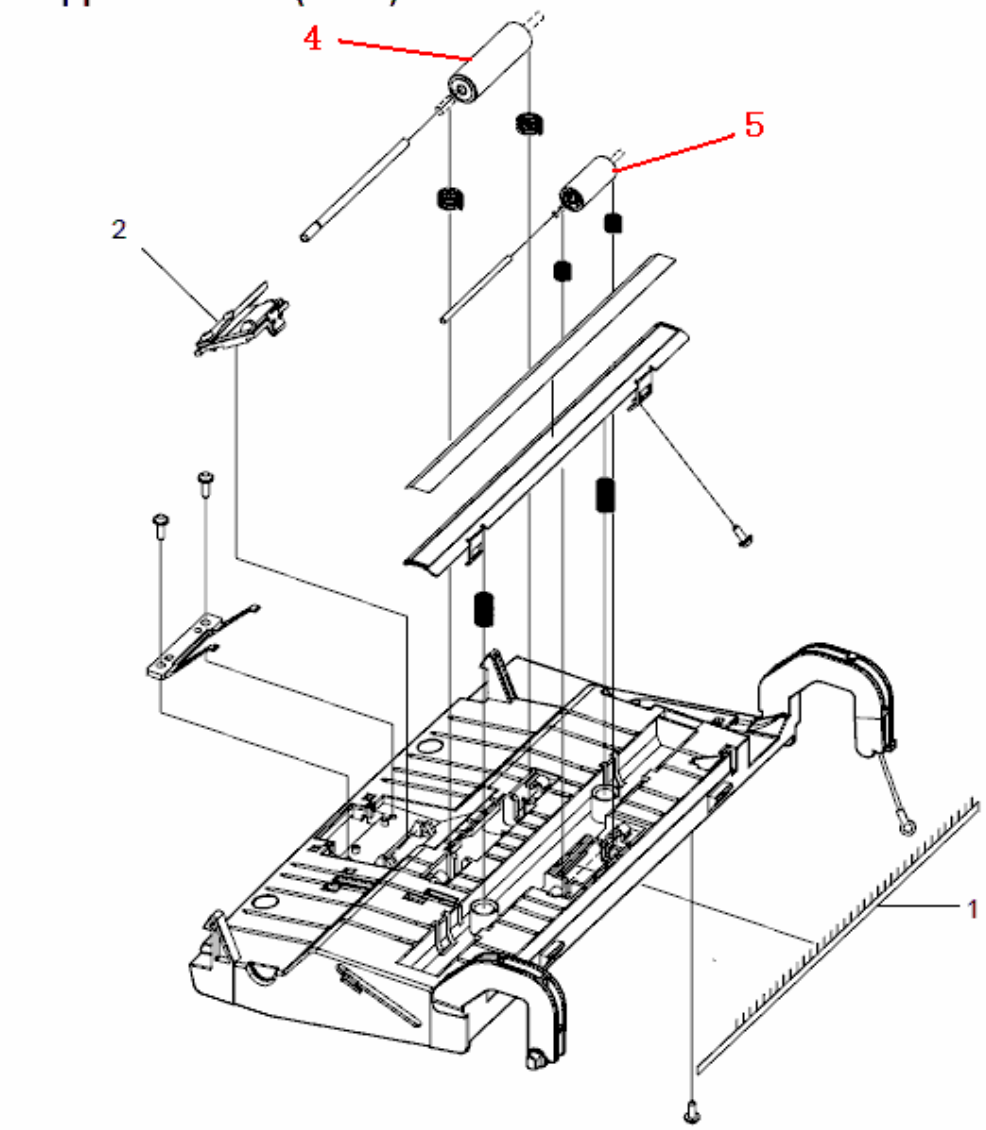
Subject: Rollers (Upper Scanner)	Prepared by: Y. Gaman
From: 1st Tech. Support Sec. Service Support Dept.	

Classification:			
	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

Change: This part was added.
Reason: Requests from the field.

NEW Part	Description	Q'ty	Int	Page	Index	Note
H9169688	ROLLER IDLE SCAN	1	-	9	4	
G9601197	PINCH ROLLER	1	-	9	5	

4.Upper Scanner (H916)



Model: L2c	Date: 1-Jul-09	No.: RH914009

Subject: Connection Diagram	Prepared by: Y. Gaman
From: 1st Tech. Support Sec. Service Support Dept.	

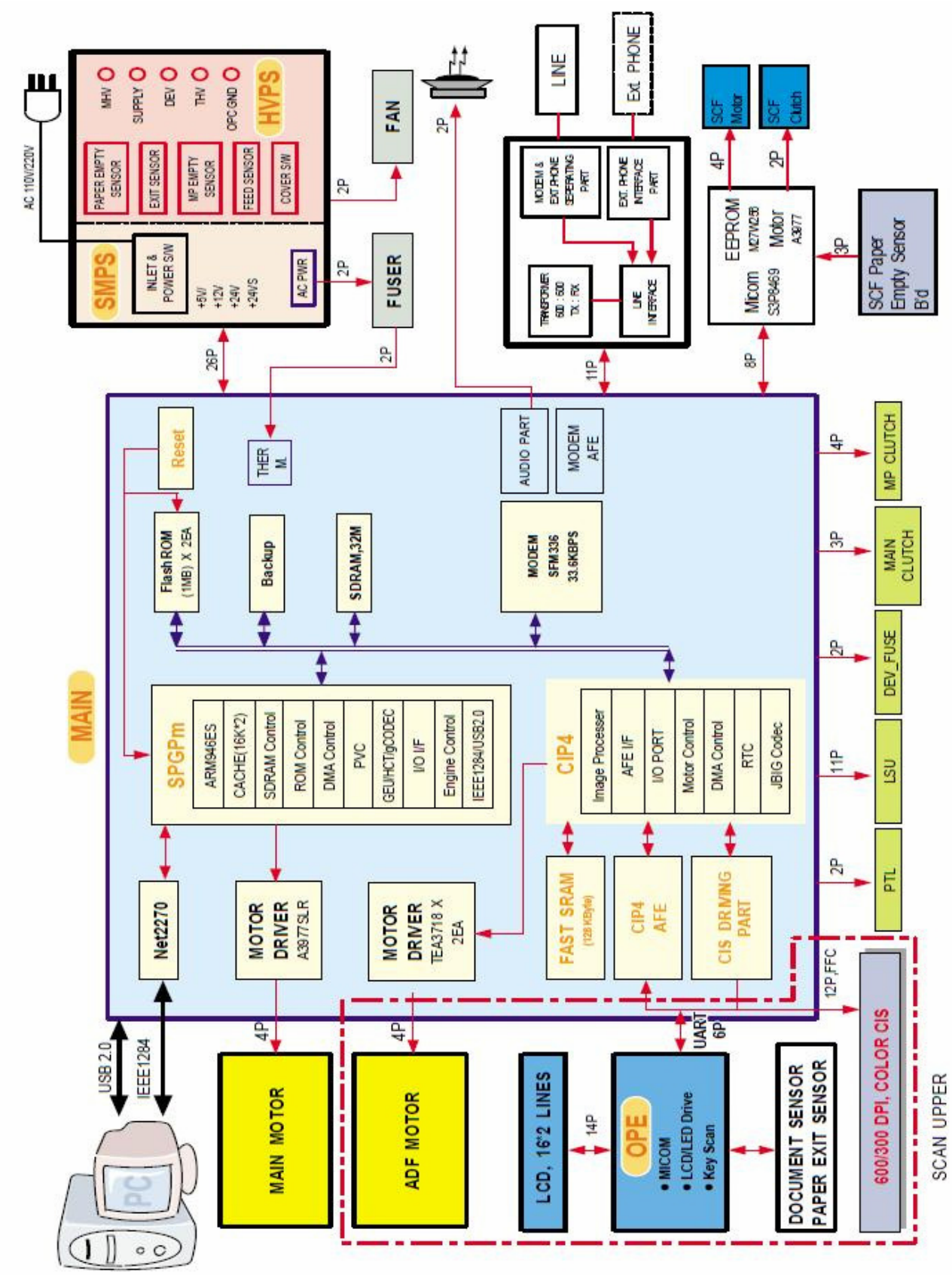
Classification:			
	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

The Service Manual for the Model L2a/L2b/L2c (machine codes H914/H915/H916) was revised as follows:

Add the block diagram and connection diagram for the H916 to the Appendix (see the next page).

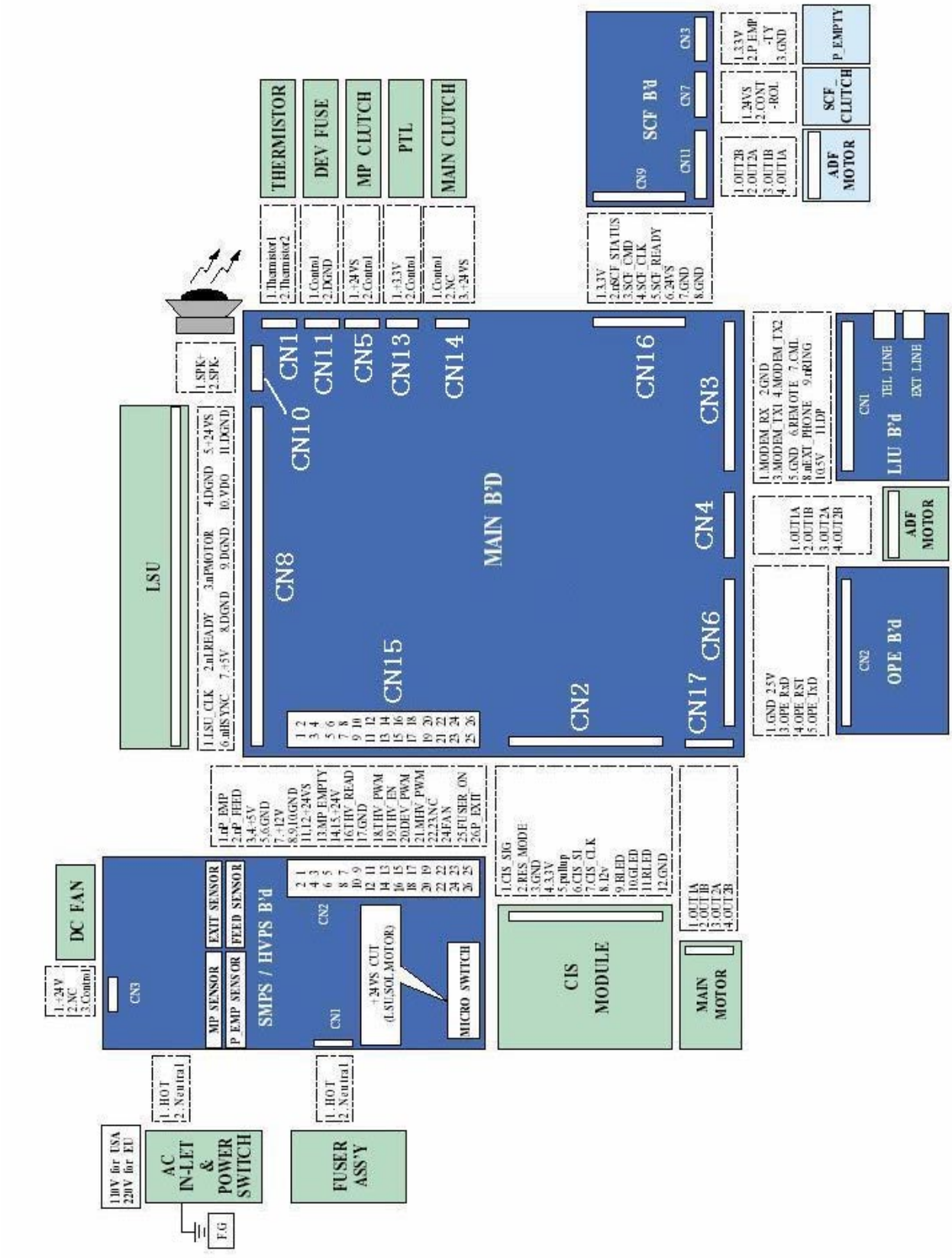
Model: L2c	Date: 1-Jul-09	No.: RH914009

Block Diagram for the H916



Model: L2c	Date: 1-Jul-09	No.: RH914009

Connection Diagram for the H916



Model: Model L2a/b/c	Date: 02-Jul-09	No.: RH914010

Subject: Transfer Roller (Exterior)	Prepared by: Y. Gaman
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 ( )	☐ Tier 2

Change: P/N B1739513 was divided into three separate parts.

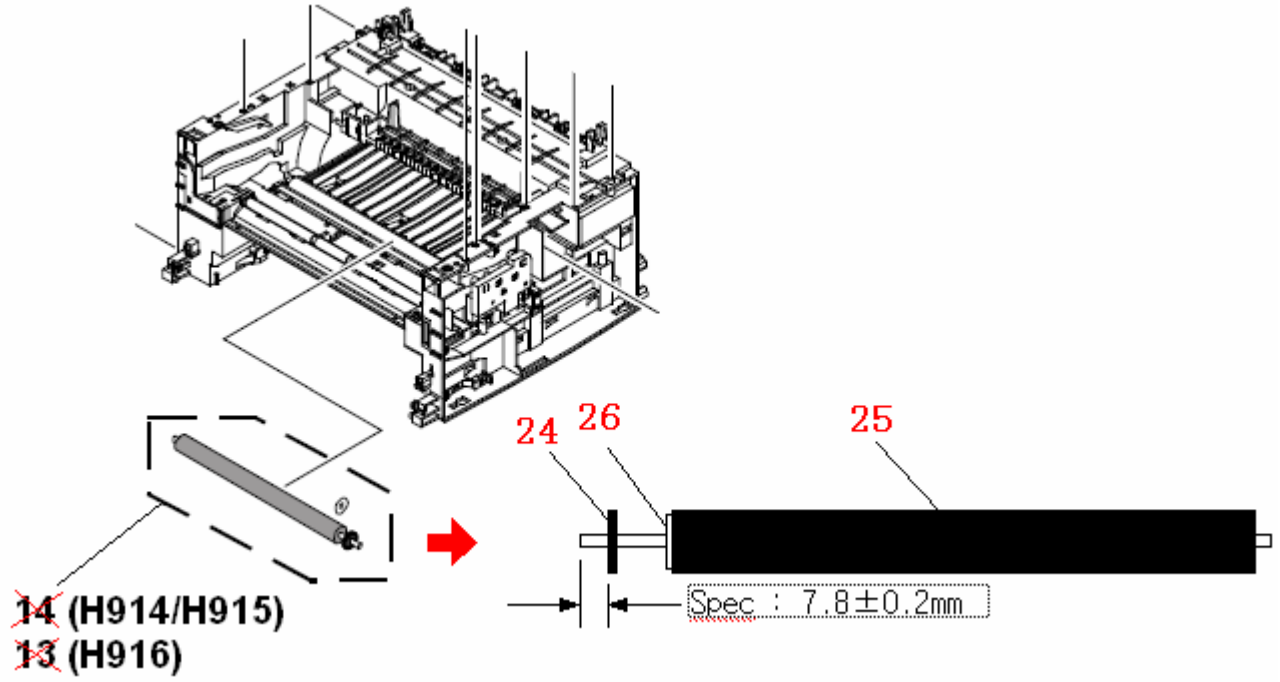
Reason: The parts vendor stopped supplying P/N B1739513 as an assembly.

<H914/H915>

Old Part Number	New Part Number	Description	Q'ty	Int	Page	Index	Note
B1739513	B1739801	GEAR - TRANSFER	1	O/O	3	14→24	
	B1739802	ROLLER - TRANSFER	1			14→25	
	B1739803	SPACER - TRANSFER	1			14→26	

<H916>

Old Part Number	New Part Number	Description	Q'ty	Int	Page	Index	Note
B1739513	B1739801	GEAR - TRANSFER	1	O/O	3	13→24	
	B1739802	ROLLER - TRANSFER	1			13→25	
	B1739803	SPACER - TRANSFER	1			13→26	



Model: L2a/b/c	Date: 30-Sep-09	No.: RH914011

Subject: Spring - Cassette (Paper Cassette)	Prepared by: Y. Gaman
From: 1st Tech. Support Sec. Service Support Dept.	

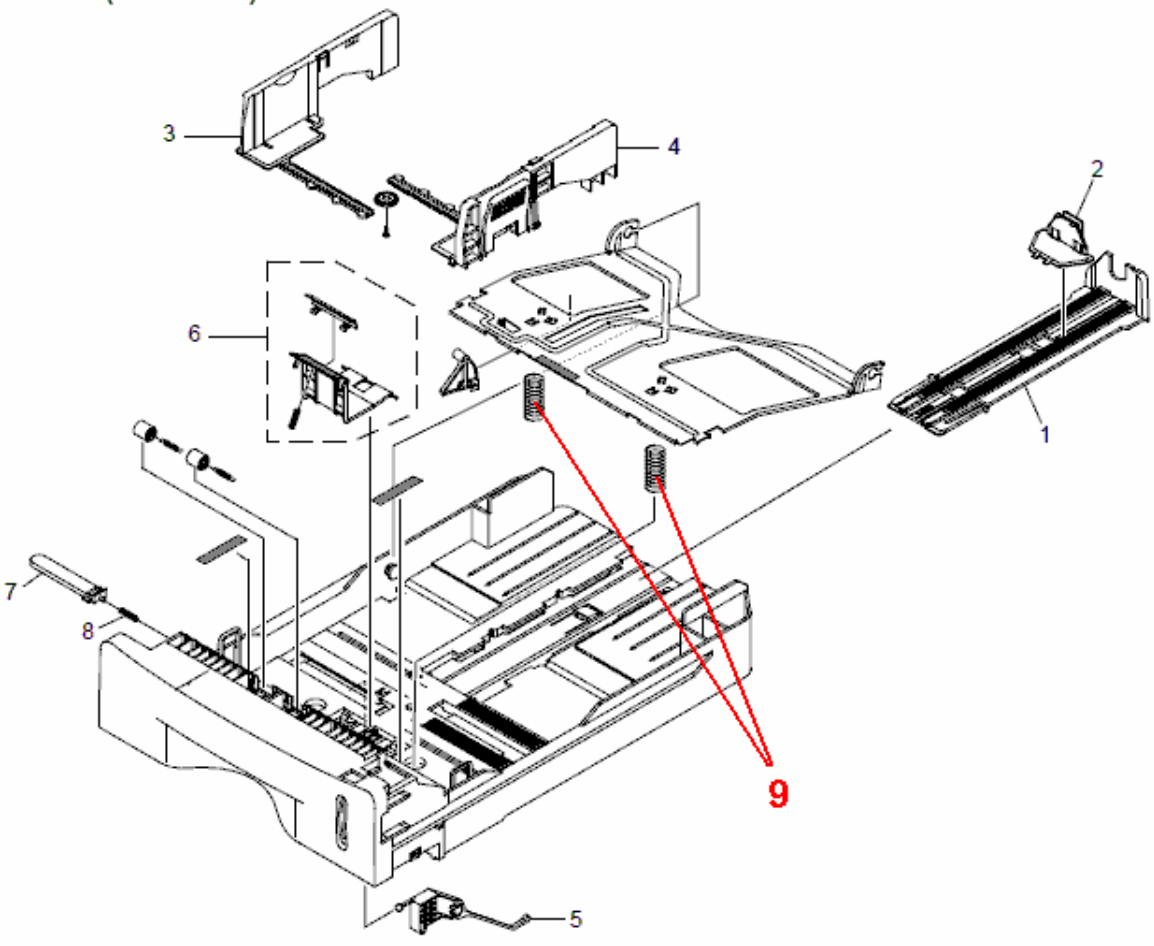
Classification:			
	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

Change: This part was added.
Reason: Requests from the field.

<H914/H915>

NEW Part	Description	Q'ty	Int	Page	Index	Note
G9601016	SPRING - CASSETTE	2	-	17	9	

8.Paper Cassette (H914/H915)

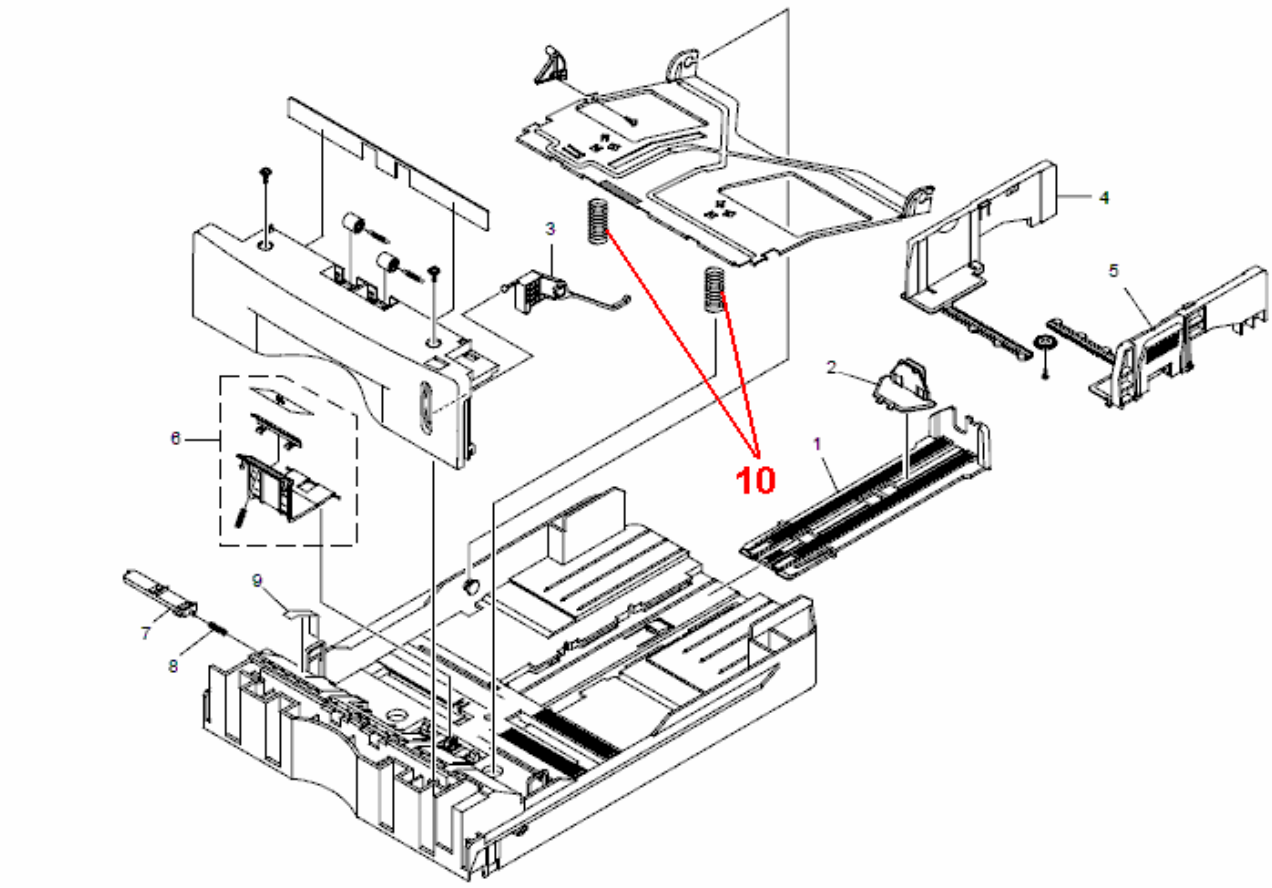


Model: L2a/b/c	Date: 30-Sep-09	No.: RH914011

<H916>

NEW Part	Description	Q'ty	Int	Page	Index	Note
G9601016	SPRING - CASSETTE	2	-	19	10	

9.Paper Cassette (H916)



RICOH **Technical Bulletin** **PAGE: 1/1**

Model: L2c	Date: 09-Nov-09	No.: RH914012

Subject: SHEET-CIS	Prepared by: Kiboh Nakano
From: 2nd Tech. Support Sec. Service Support Dept.	

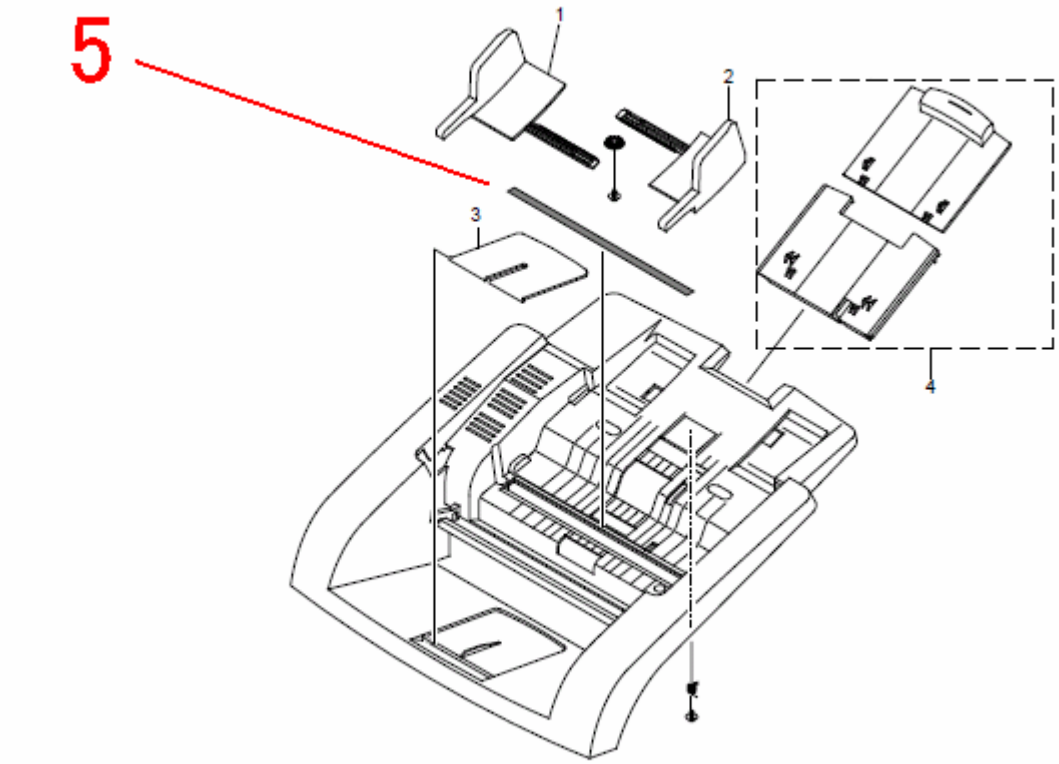
Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

Change: This part was added.
Reason: Requests from the field.

<H916>

NEW Part	Description	Q'ty	Int	Page	Index	Note
H9169689	SHEET-CIS	1	-	5	5	

2.Top Cover (H916)



Model: L2a/b	Date: 24-Dec-09	No.: RH914013

Subject: Gear Drive 16, Idle Shaft, Pressure Spring	Prepared by: Kiboh Nakano
From: 2nd Overseas Tech. Support Sec., 2nd PQM Dept.	

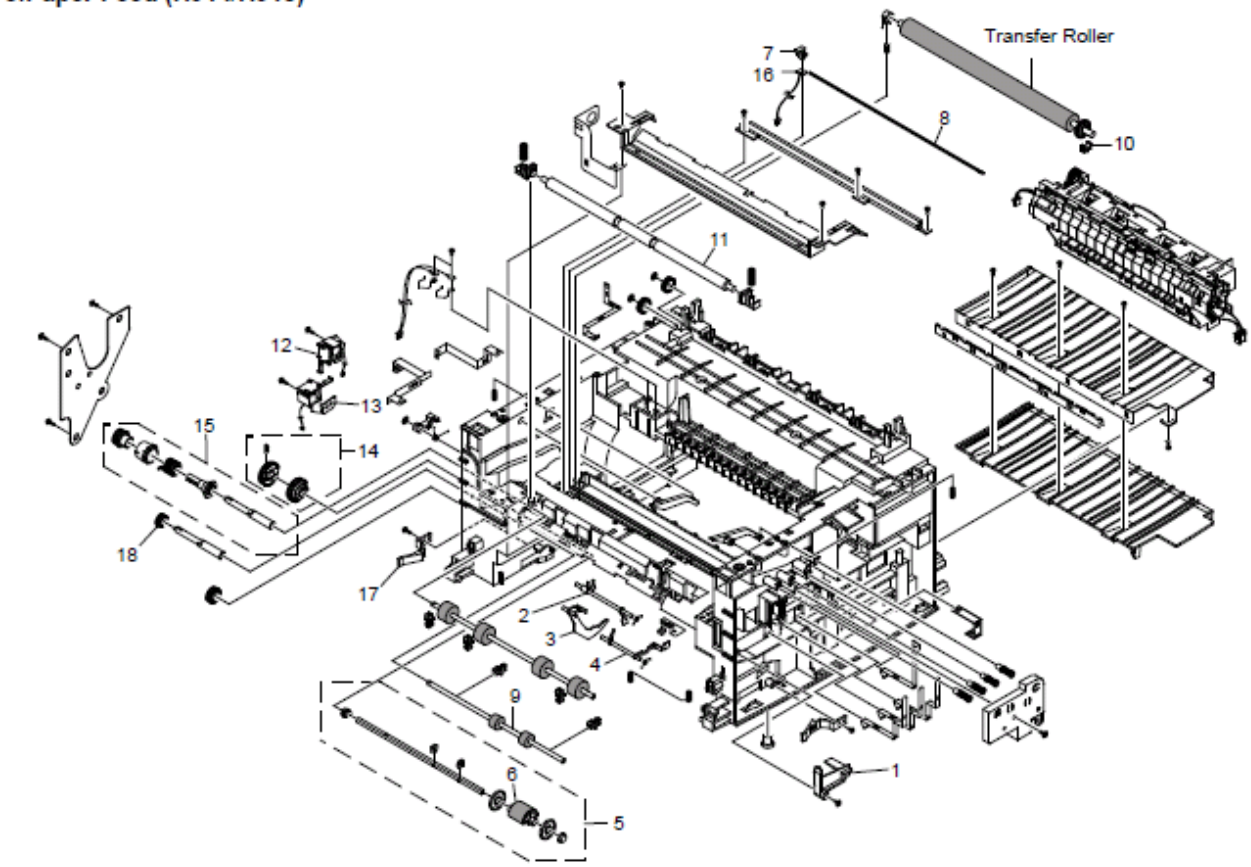
Classification:			
	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

Change: These parts were added.
Reason: Requests from the field.

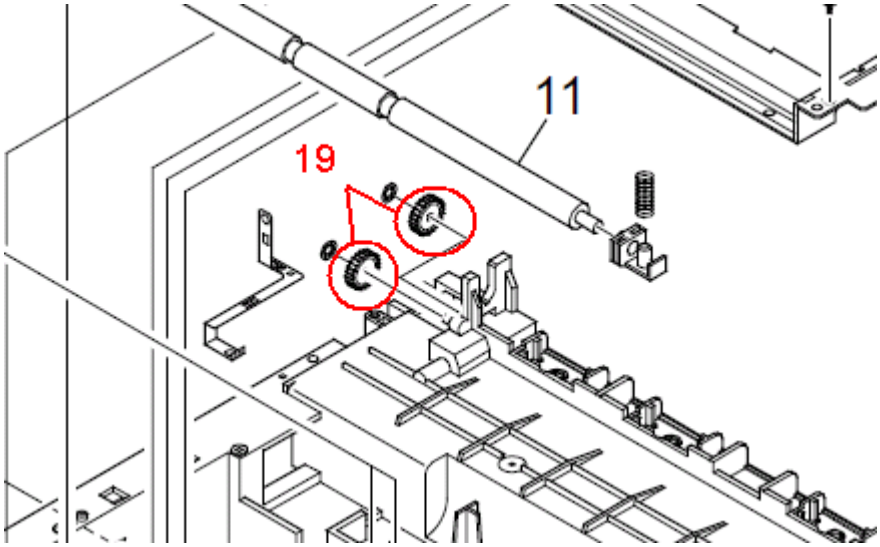
<H914/H915>

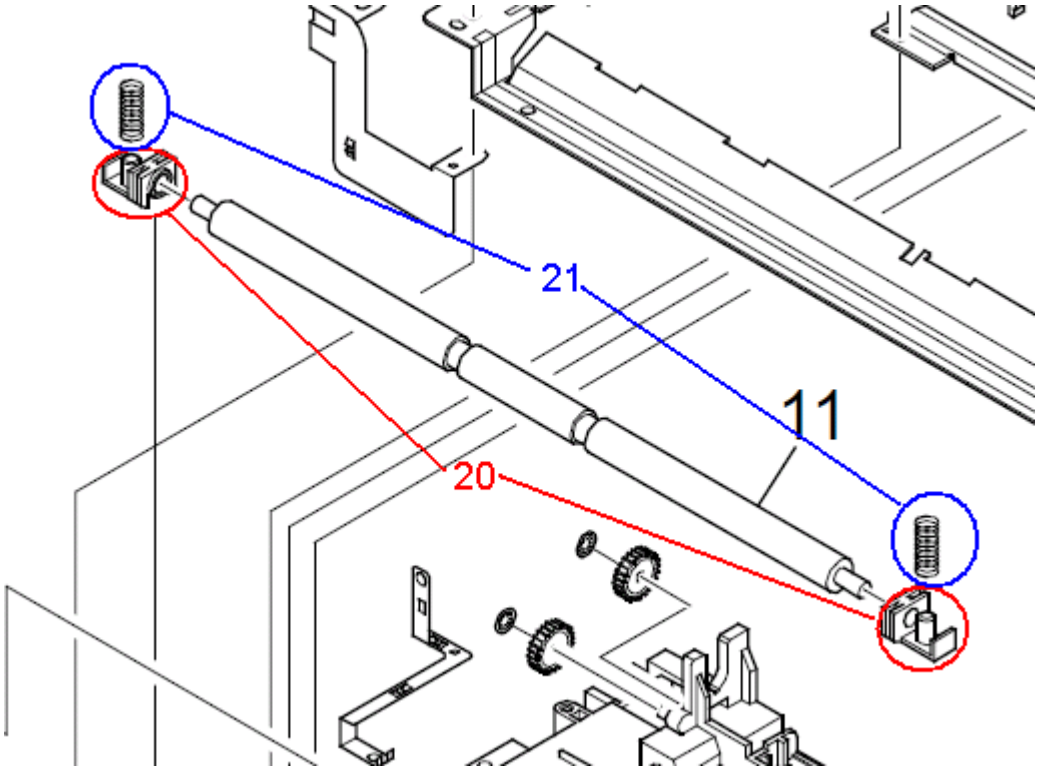
New Parts	Description	Q'ty	Int	Page	Index	Note
B1739804	GEAR DRIVE16	2		11	19	
G1449556	BUSHING-IDLE SHAFT	2		11	20	
G9601080	PRESSURE SPRING	2		11	21	

5.Paper Feed (H914/H915)



Model: L2a/b	Date: 24-Dec-09	No.: RH914013





Model: L2a/b/c	Date: 05-Feb-10	No.: RH914014

Subject: Feed Roller (Paper Feed)	Prepared by: Y. Gaman
From: 2nd Overseas Tech Support Sec. 2nd PQM Dept	

Classification:			
	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

<H914/H915>

New Part	Description	Q'ty	Int	Page	Index	Note
G9601107	Feed Roller	1		12	24	

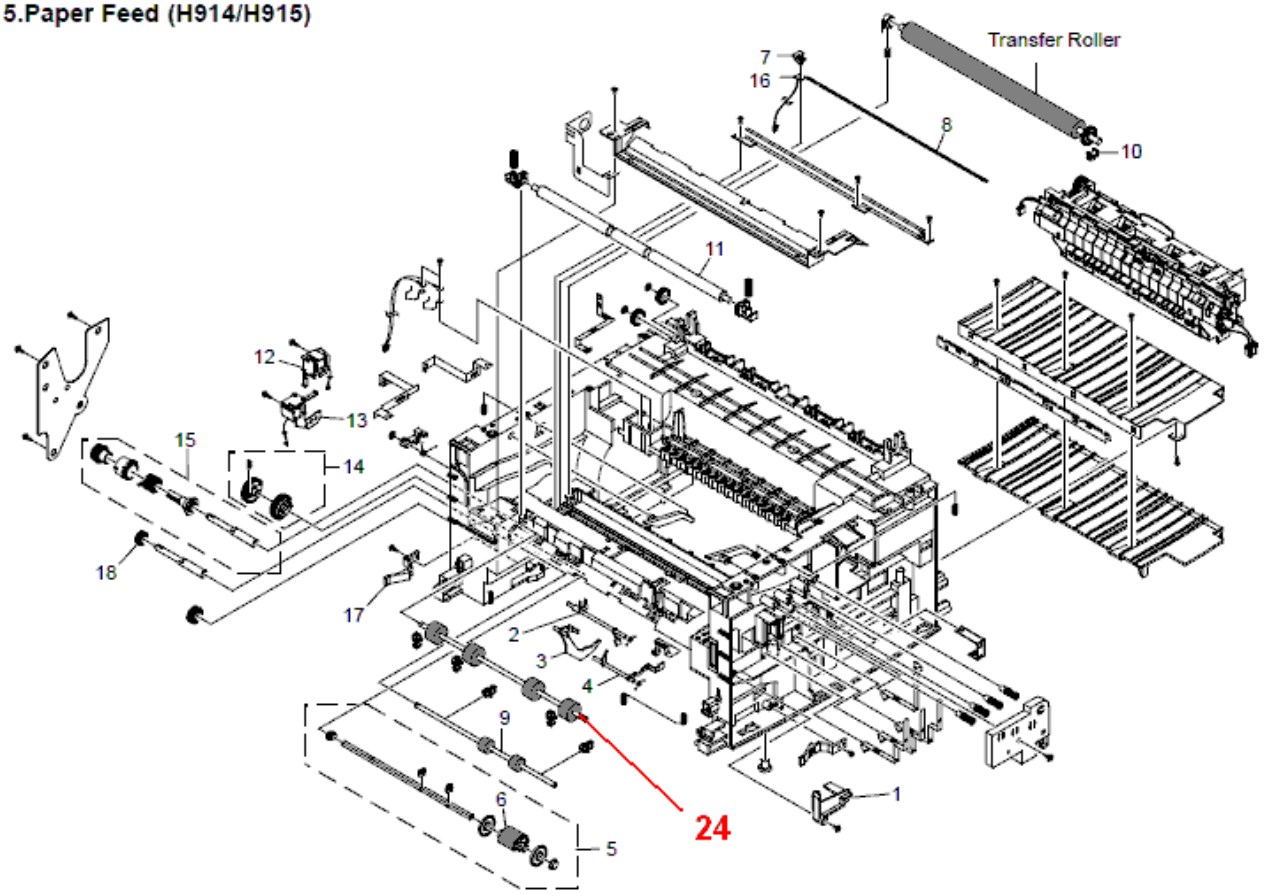
<H916>

New Part	Description	Q'ty	Int	Page	Index	Note
G9601107	Feed Roller	1		12	24	

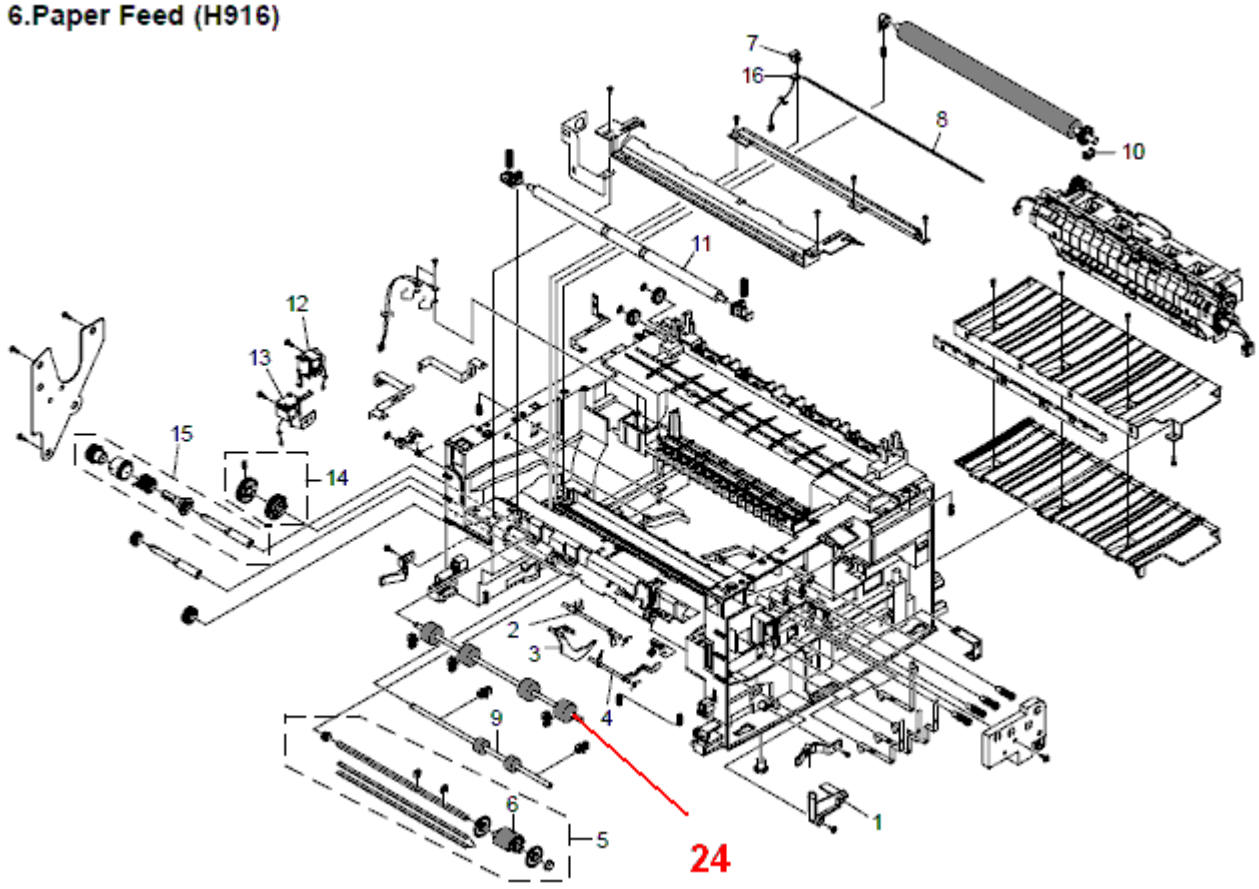
Change: This part was added.

Reason: Requests from the field.

5.Paper Feed (H914/H915)



6.Paper Feed (H916)



Model: L2a/b	Date: 18-May-10	No.: RH914015

Subject: New service part is added.	Prepared by: K. Nakano
From: 2nd Overseas Tech Support Sec. 2nd PQM Dept	

Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		☐ Tier2

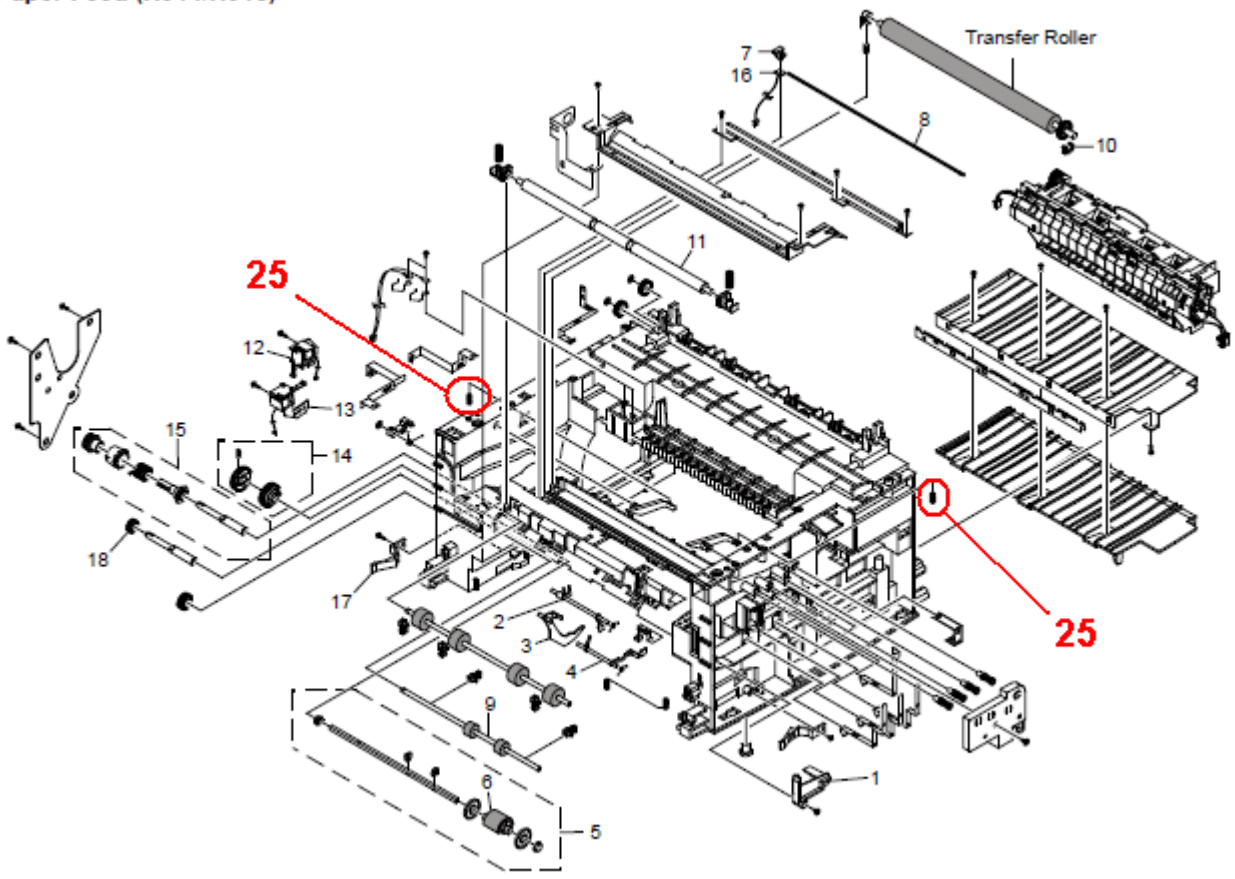
Change:
New service part is added.

Reason:
Request from the field.

<H914/H915>

New Part #	Description	Q'ty	Int.	Page	Index	Note
G1861203	SPRING - GUIDE	2	-	11	25	

5.Paper Feed (H914/H915)



Model: L2c	Date: 8-Jul-14	No.: RH914016

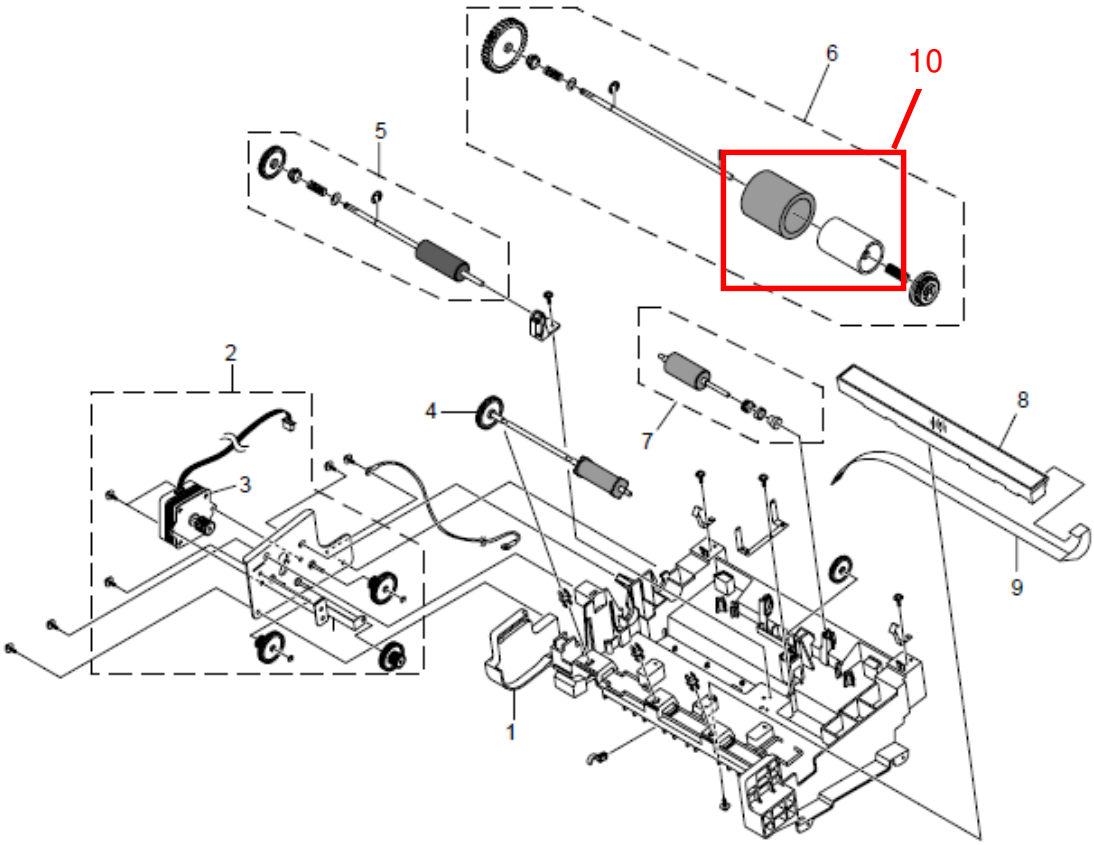
Subject: ADF Roller	Prepared by: J. Mochizuki
From: 3rd Tech Service Sect., MFP/P Tech Service Dept.	

Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

Change:
New service part is added.

Reason:
Request from the field.

<H916>

New Part #	Description	Q'ty	Int.	Page	Index	Note
H9169690	SLEEVE-ADF ROLLER	1	-	11	10	

5.Lower Scanner (H916)