



ML3050TECH

**Technical Instructions**

**Printers & OEM Info**

**Tools & Supplies**

**1**

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**OEM Cartridge Numbers:**  
Dell 310-7943  
Dell 310-7945  
Samsung ML-D3050A  
Samsung ML-D3050B

**Machine Models:**  
Dell 1815dn MFP  
Samsung ML-3050  
Samsung ML-3051N  
Samsung ML-3051ND

**Tools:**  
Phillips Screwdriver  
Small Flat Screwdriver  
Needle Nose Pliers

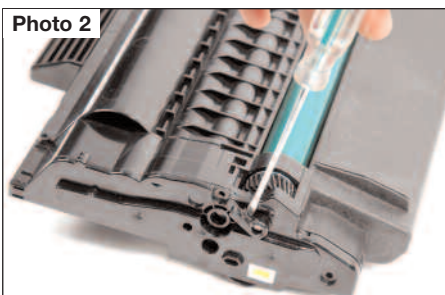
**Supplies:**  
Chip  
Drum  
Toner  
Wiper Blade



**Cartridge disassembly**

**Step 1**

Place the cartridge on a work bench with drum facing up and the handle towards you. Using a Phillips screwdriver, remove the three screws that hold the cartridge gear end cap.  
(See Photo 1)



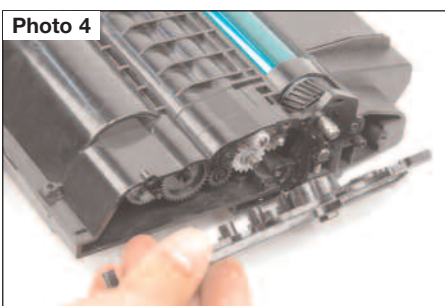
**Step 2**

Using a small flat screwdriver, gently pry off the drum lock axle bearing bushing.  
(See Photo 2)



**Step 3**

Using a small flat screwdriver, press and release the locking clips that hold the gear end cap.  
(See Photo 3)



Remove the contact end cap. (See Photo 4)

### Step 4

Rotate the cartridge 180°. Using a Phillips screwdriver, remove the three screws that hold the cartridge contact end cap. (See Photo 5)

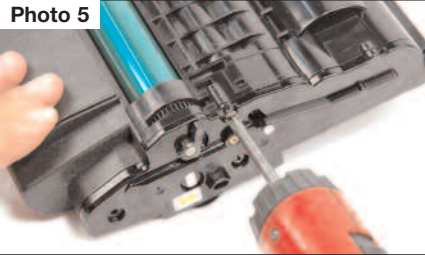


Photo 9



### Step 7

Remove the PCR cleaning roller housing. (See Photo 9) Clean the foam roller with compressed dry air or a vacuum.

Photo 10



### Step 8

Using a small flat screwdriver, pry off the sides of the toner hopper. Attach to the waste hopper posts. (See Photos 10 and 11)

Photo 11



### Step 5

Using a small flat screwdriver, gently pry off the drum lock axle bearing bushing. (See Photo 6)

Photo 12



### Step 9

Separate the toner hopper from the waste hopper. (See Photo 12)



Photo 6

Photo 13



## Toner Hopper disassembly

### Step 10

With a small flat screwdriver pry off the developer roller drive gear. (See Photo 13) Remove the rest of the gears.

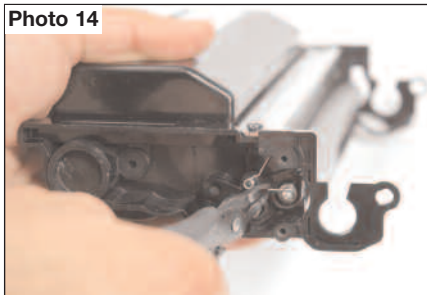
### Step 6

With a small flat screwdriver, press and release the locking clips that hold the contact end cap. (See Photo 7) Remove the contact end cap. (See Photo 8)



Photo 7

Photo 14



### Step 11

Spin the toner hopper 180°. With a needle nose pliers, remove the doctor blade contact spring. (See Photo 14)



Photo 8

Photo 15



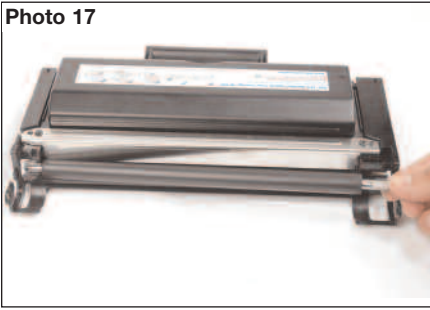
### Step 12

Using a small flat screwdriver, press down the clips that hold the developer roller bearing end cap. (See Photo 15) Remove the developer roller bushing end cap. (See Photo 16)

Photo 16



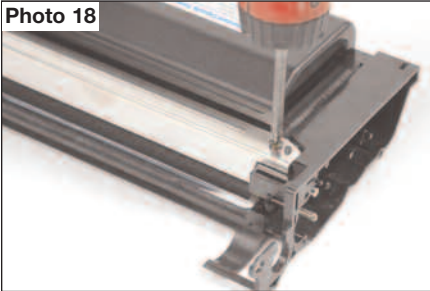
Photo 17



**Step 13**

Remove the developer roller by holding the metal drive shaft. (See Photo 17)

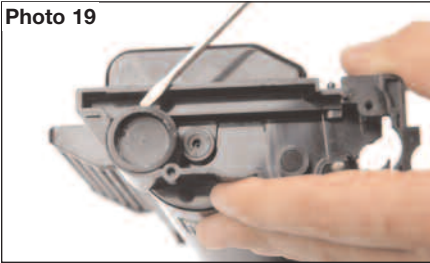
Photo 18



**Step 14**

With a Phillips screwdriver, remove the two screws that hold the doctor bar. (See Photo 18)  
Clean the doctor blade.

Photo 19



**Step 15**

Using a small flat screwdriver, gently pry off the toner hopper fill plug. (See Photo 19) Clean the toner hopper using compressed dry air or a vacuum. (See Photo 20)

Photo 21

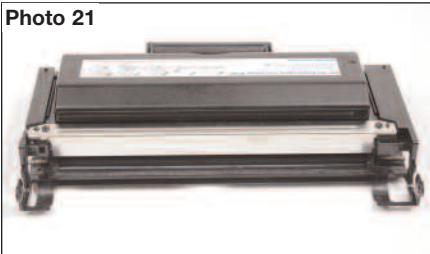
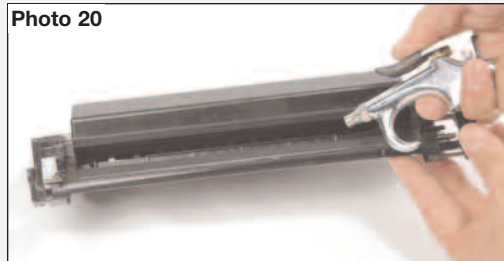


Photo 20



**Step 19**

Install the doctor blade contact spring. The long bend wire has to make contact to the doctor blade and the short straight wire to the developer roller shaft. (See Photo 24)

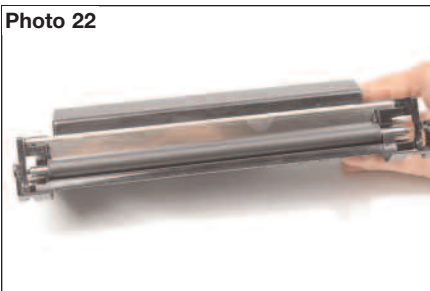
Photo 24



**Step 20**

Install the small washer that prevents leaking on the adder roller shaft. (See Photo 25) Install all toner hopper gears. (See Photo 26)

Photo 22



**Toner Hopper assembly**

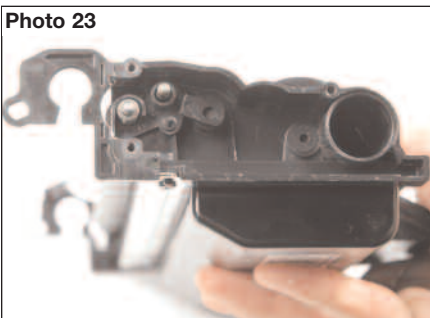
**Step 16**

Set the doctor bar on the toner hopper and install the two screws that hold the doctor bar in place. (See Photo 21)

**Step 17**

Install the developer roller by holding the metal drive shaft. (See Photo 22) Make sure that the drive shaft goes on the gears side of the toner hopper.

Photo 23



**Step 18**

Install the developer roller bearing end cap. (See Photo 23)

Photo 25



Photo 26



**Step 21**

Fill the toner hopper with correct toner. (See Photo 27) Install the fill plug and set the toner hopper at side.

Photo 27


**Waste hopper disassembly**
**Step 22**

Set the waste hopper on a work bench. Take a small flat screwdriver and pry off the locking C clip from the drum axle. (See Photo 28) Slice out the drum axle. (See Photo 29) Remove the drum from the waste hopper.

Photo 28



Photo 29

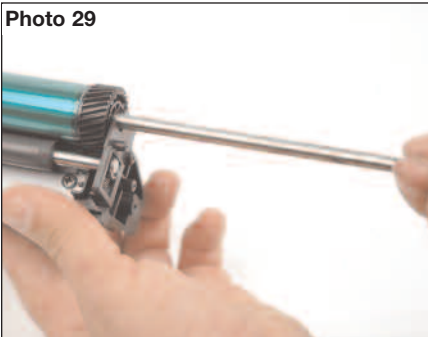


Photo 30



Photo 31



Photo 32



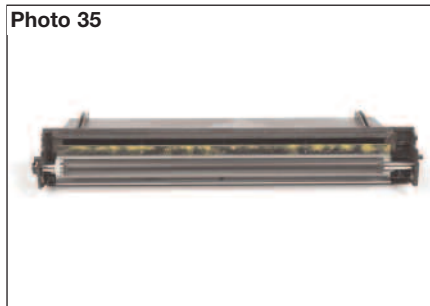
Photo 33



Photo 34



Photo 35


**Step 23**

Hold the PCR by the white gear that is on the short shaft of the PCR and slide it to the opposite side. Remove the PCR. (See Photo 30) Clean the PCR with a lint-free cloth and clean water.

**Step 24**

With a Phillips screwdriver, remove the two screws that hold the wiper blade. (See Photo 31)

**Step 25**

Clean the waste hopper using compressed dry air or a vacuum. (See Photo 32) Inspect the recovery blade for any physical damage. If there is any, it must be replaced.

**Waste hopper assembly**
**Step 26**

Take a wiper blade and apply lubricant. (See Photo 33)

**Step 27**

Set the wiper blade into the waste hopper and install the two screws that hold the wiper blade in place. (See Photo 34)

**Step 28**

Take the PCR and hold it by the white gear shaft and slide towards the non contact saddle, then slide back into the contact saddle until it stops. (See Photo 35)

**Note:** The short shaft with the white gear goes on the saddle contact side.

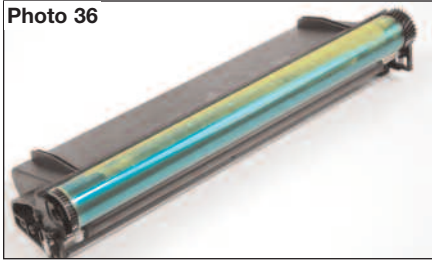


Photo 36

**Step 29**

Lubricate the drum and set it on the waste hopper with drive gear towards the non contact saddle side.  
(See Photo 36)



Photo 37

**Step 30**

Install the drum axle lock C clip onto the drum axle. (See Photo 37) Slide the drum axle through the gear contact side of the drum. (See Photo 38) Make sure that the drum axle lock C clip sits on the outer side of the waste hopper plastic wall. (See Photo 39)



Photo 38

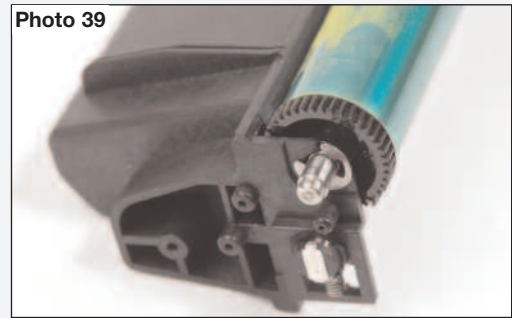


Photo 39

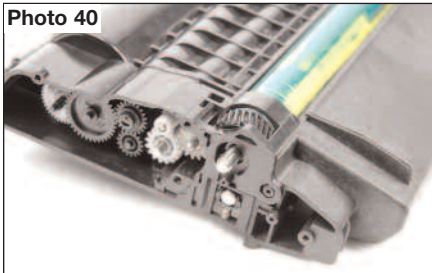


Photo 40

**Cartridge assembly**

**Step 31**

Mount the toner hopper and waste hopper. Make sure the tabs lock into the placement posts on the waste hopper.  
(See Photos 40 and 41)



Photo 41

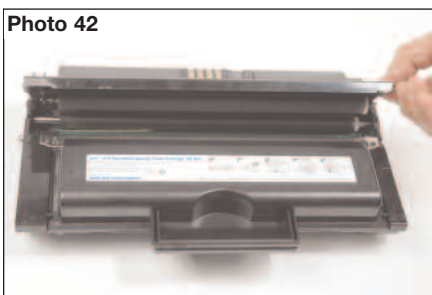


Photo 42

**Step 32**

Set the cartridge with label facing up and the toner hopper towards you. Take the PCR cleaning roller housing and install it on the cartridge.  
(See Photo 42)

**Step 33**

Clean the contacts from the contact end cap. (See Photo 43) Place it onto the side of the cartridge and install the three screws that hold the contact end cap in place.  
(See Photo 44)



Photo 43



Photo 44

**Step 34**

Install the gear end cap and install the three screws that hold the gear end cap in place. (See Photo 45)



Photo 45

**Step 35**

Turn the cartridge over with the drum facing up and the handle towards you. Install the larger drum lock axle bearing into drive gear side of drum and install the other drum lock axle bearing on the opposite side.  
 (See Photos 46 and 47)

Photo 46

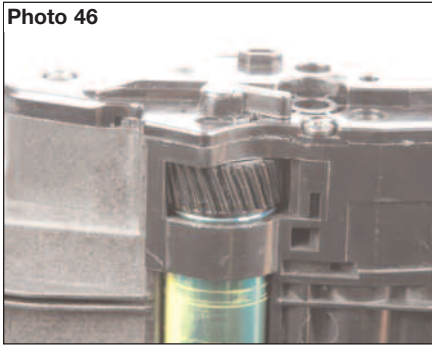


Photo 47



Photo 48



Photo 49



Photo 51

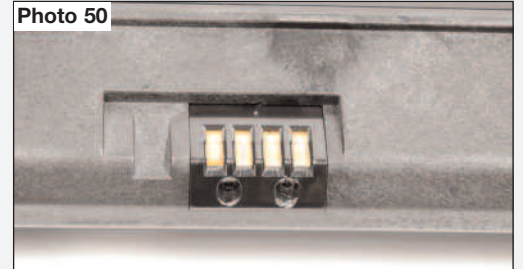


Photo 52


**Step 36**

The chip is located on the center of the waste hopper and it's attached to the cartridge by two ultrasonic welded pins. These pins must be removed. (See Photo 48) The chip cover can be reattached with double-sided tape.  
 (See Photos 49 and 50)

Photo 50


**Step 37**

Cartridge is ready (See Photos 51 and 52)

**Tech Tips - Print Defect**

Upper Fuser Roller 77.8 mm

OPC Drum 75.5 mm

Lower Pressure Roller 75.4 mm (back of page)

Transfer Roller 47.1 mm (back of page)

Supply Roller 44.9 mm

PCR 37.7 mm

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