Troubleshooting: TCRU

Model Name: B234/235/236

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1. TROUBLESHOOTING

1.1 BEFORE YOU BEGIN

1.1.1 WHAT ARE SC CODES?

The machine displays an SC code ("SCnnn" where "nnn" is a 3-digit number) when an error occurs in the operation of the machine. The copier stops and cannot be used when an SC code appears.

When an SC code appears:

1. Write down the SC number.
2. Turn off the main power switch.

   NOTE: The main power switch is the switch on the lower left side of the machine under the hinged plastic cover.
3. Wait a few moments then turn the machine on again.

   In most cases, cycling the machine off and on will restore it to full operation.
4. If the SC code appears again, check it against the table on the next page.
5. If you see the SC code listed in the table on the next page, do the recommended procedure.

   -or-

   If you do not see the SC code in the table below, call for service.

⚠CAUTION

Before you replace any unit:

- **Always turn the machine off and unplug the power cord from the power source.**
- **Let the machine sit for about 10 minutes to cool off before you do any procedure. This allows time for the fusing unit to cool.**

Here is a list of selected SC codes. If the SC code on the copier operation panel display is in the list below, do the recommended procedure. If the displayed SC code is not in this list, call for service.

Code	Error	Procedure
SC300	Charge Corona Error 1: Charge Leak	Replace charge corona unit
SC304	Charge Corona Error 2: Grid Leak	Replace charge corona unit
SC312	Pre-Charge Output Error 1: Leak	Replace pre-charge corona unit
SC313	Pre-Charge Output Error 1: Grid Output	Replace pre-charge corona unit
SC320	Development Bias Error	Replace development unit
SC368	TD Sensor Adjustment Error 1	Replace development unit
SC372	TD Sensor Adjustment Error 2	Replace development unit
SC438	Drum Potential Sensor Error 5: ID Sensor Pattern Potential	Replace PCU

1.2 TROUBLESHOOTING IMAGE QUALITY PROBLEMS

This section describes some image quality problems and tells you what to do about them.

1.3 BEFORE YOU BEGIN

Paper Feed Direction

Before you begin this section, please note that the dark arrow in each illustration indicates the *direction of paper feed*.

Sky Shots

You may be instructed to make a *sky shot*. To do a sky shot:

1. Raise the ADF to the up position (vertical).
2. If there is an original on the exposure glass, remove it. There should be nothing on the exposure glass.
3. If there is a strong overhead light shining onto the exposure glass, block the light with a large piece of paper from the side of the machine.
   NOTE: If you do not block the overhead light, this may prevent getting a perfectly black copy and spoil the test.
4. Press the copier [Start] button. The exposure lamps will flash and the copier will print a completely black copy. This is your sky shot.

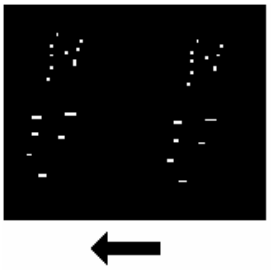
SP Adjustments: Super User Program Mode

All recommended SP adjustments are done in the Super User Program mode. To enter the Super User Program Mode:

1. Press [User Tools] on the copier operation panel.
2. On the display touch [Adjustment Settings for Skilled Operators].
3. Enter your login user name and password.

1.4 IMAGE QUALITY PROBLEMS

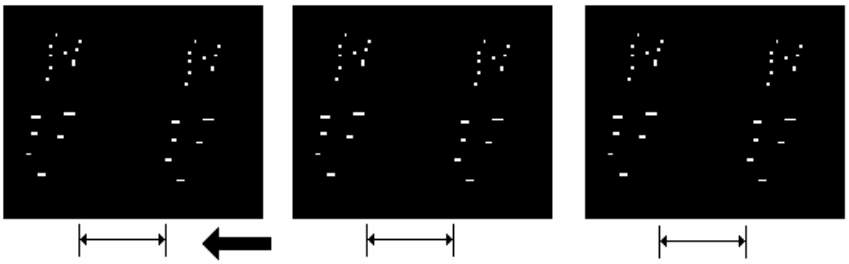
1.4.1 PROBLEM 1: WHITE SPOTS



TCRUTS01A.BMP

White spots appear as dots or small lines at 314 mm (12 in.) intervals in the direction of paper feed.

NOTE: See the next page for an actual sample. *The scanned image in the samle is not sized 1:1.*

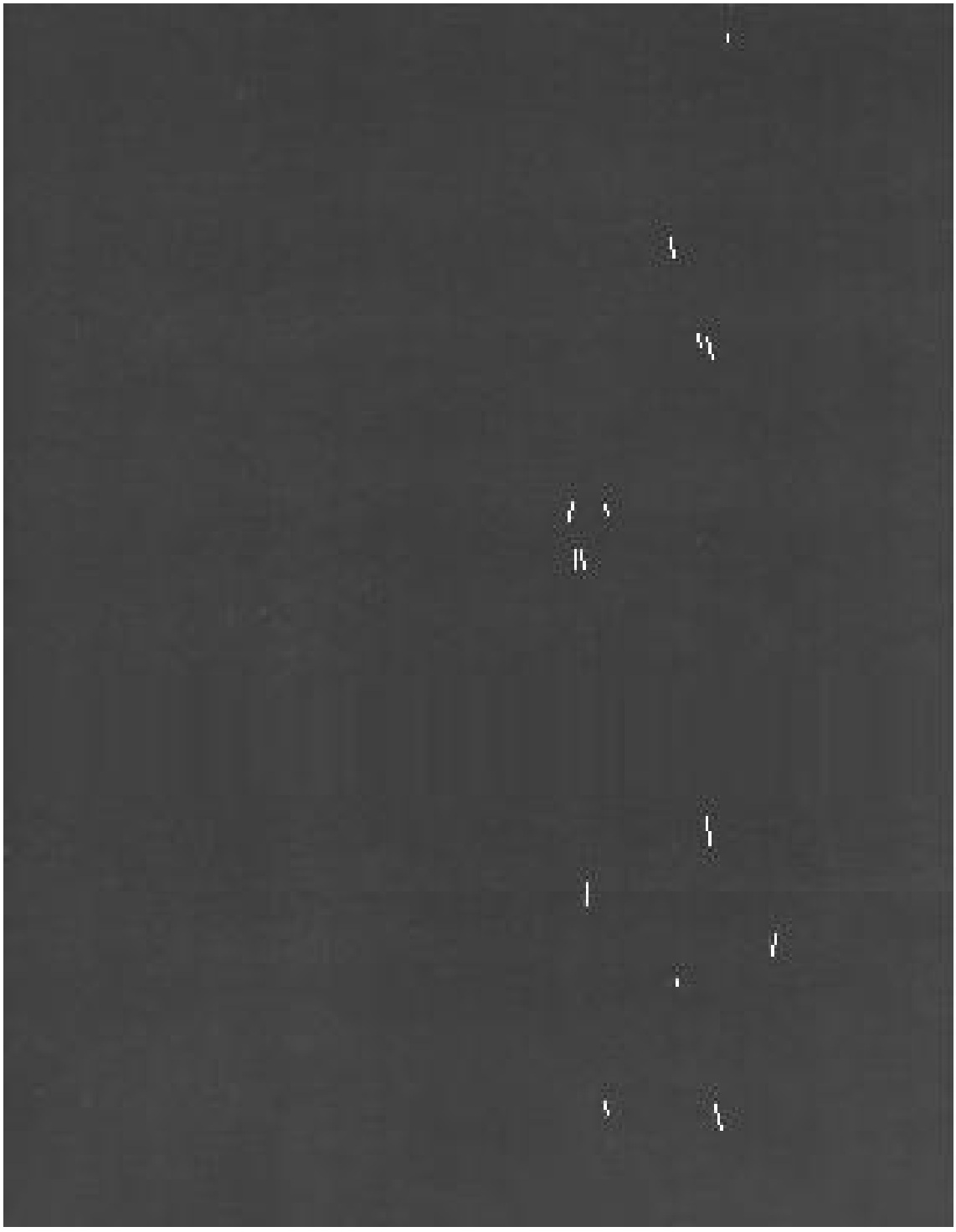


TCRUTS02.BMP

Step 1: Make three sky shots on A3/DLT size paper.

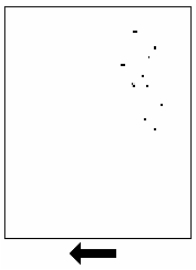
Step 2 If you can see these white spots in the sky shots, **replace the drum cleaning unit**.

Step 3 If unit replacement does not solve the problem, call for service.



TCRUTS REV 1-2.JPG

1.4.2 PROBLEM 2: SHARP BLACK SPOTS



TCRUTS03A.BMP

These black spots mark the page with very sharp dots.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

Step 1 If the dots are about 40 mm (about 1½ in.) from the trailing edge of the paper, **replace the PCU**.

Step 2 If unit replacement does not solve the problem, call for service.

RICOH

Concern for the environment tends to have a dual focus—conservation, on the one hand, and pollution control, on the other. In light of the delicate interrelationships binding all of nature together, however, the two should perhaps be viewed as inseparable.

The battle to avoid the greenhouse effect is a case in point. Pollution control is essential. Scientists estimate that CO_2 emissions will have to be reduced by up to 80 percent in the coming years if we are to succeed.

One major stumbling block to progress is economic. Many of the technologies necessary to cut pollution are already available. The U.S. has used technology to keep its CO_2 emissions at the same level for several years, despite considerable growth in production. Japan has imposed even stricter standards, as a result of which the air in heavily industrialized cities is far cleaner than during the developing years of the 1960s and early 1970s.

It is significant that these improvements came after. Japan had passed the development stage, since the developing countries—the ones least able to afford the new, cleaner technologies—have the most pressing need for them. Nevertheless, there are encouraging signs. Mexico City, for example, until recently enveloped constantly in smog, now enjoys an occasional day with clear skies.

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Since pollution-reducing technologies are often more efficient, they can also conserve another important resource, energy. If consumption continues at present levels, the world's oil reserves will most likely be depleted by about the middle of the coming century. It is important that industries everywhere be supplied with the most efficient possible technologies to help conservation.

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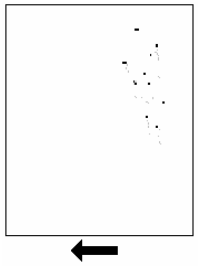
TCRUTS REV 3.JPG

1.4.3 PROBLEM 3: SHARP/FAINT BLACK SPOTS



TCRUTS04A.BMP

Sharp and faint black spots mark the page running perpendicular to the direction of paper feed.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

Step 1 If the dots appear in a line perpendicular to the direction of feed, **replace the fusing web unit.**

Step 2 If unit replacement does not solve the problem, call for service.

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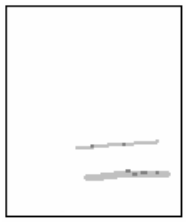
TCRUTS REV 17.JPG

1.4.4 PROBLEM 4: VERTICAL BLACK STRIPES



TCRUTS06A.BMP

These black stripes (less than 1 mm wide) are vertical, parallel to the direction of paper feed.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

Step 1 If the stripes are curved, **replace the drum cleaning unit**.

Step 2 If unit replacement does not solve the problem, call for service.

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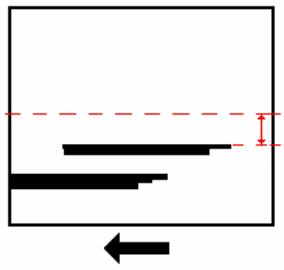
TCRUTS REV 5.JPG

1.4.5 PROBLEM 5: VERTICAL BANDING



TCRUTS07B.BMP

These black bands (more than 1 mm wide) are vertical, parallel to the direction of paper feed.

NOTE: Actual sample is not available.

Step 1 If the bands are between 85 mm to 135 mm (3.4 to 5.4 in.) from the center of the paper, **replace the fusing unit.**

Step 2 If unit replacement does not solve the problem, call for service.

1.4.6 PROBLEM 6: LIGHT COPIES

TCRUTS13A.BMP

The overall appearance of the copies is light, especially in filled areas the density is low.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

Step 1 In the Super User Program mode, do **SP2730 002** (Set Unit Default – Drum/Cleaning)

Step 2 Make some copies. Does the image density appear darker?

Yes Finished!

No **Replace the development unit**.

Step 3 If unit replacement does not solve the problem, call for service.

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TCRUTS REV 12.JPG

1.4.7 PROBLEM 7: DIRTY BACKGROUND

TCRUTS10A.BMP

Random "powdered" dots appear and create a dirty background.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

Step 1 In the Super User Program Mode, do **SP2730 002** (Set Unit Default – Drum/Cleaning)

Step 2 Make some copies. Is the problem solved?

Yes Finished!

No **Replace the development unit.**

Note: If the counter indicates that the drum is near the end of its target service life (2,000 K), replace the PCU first.

Step 3 If unit replacement does not solve the problem, call for service.

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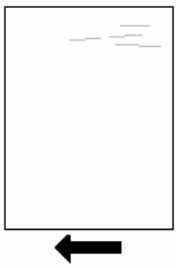
TCRUTS REV 15.JPG

1.4.8 PROBLEM 8: STREAKS



TCRUTS20.BMP

Wide streaks appear in the direction of paper feed.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

Step 1 If irregular streaks appear in the direction of paper feed, **replace the charge corona unit**.

Step 2 If unit replacement does not solve the problem, call for service.

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TCRUTS REV NEW1.JPG

1.4.9 PROBLEM 9: WHITE BANDS

TCRUTS21.BMP

A wide band appears in the direction of paper feed in a sky shot.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

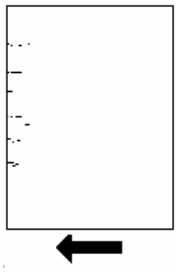
Step 1 Make a sky shot.

Step 2 If a white or gray band appears in the direction of paper feed in the sky shot, **replace the development unit.**

Step 3 If unit replacement does not solve the problem, call for service.

TCRUTS REV NEW2.JPG

1.4.10 PROBLEM 10: VERTICAL STRIPES AT LEADING EDGE



TCRUTS22.BMP

Dirty, irregular streaks appear at the leading edge in the direction of paper feed.

NOTE: See the next page for an actual sample. *The scanned image in the sample is not sized 1:1.*

Step 1 If dirty, irregular streaks appear at the leading edge in the direction of paper feed, **replace the fusing unit.**

Step 2 If unit replacement does not solve the problem, call for service.

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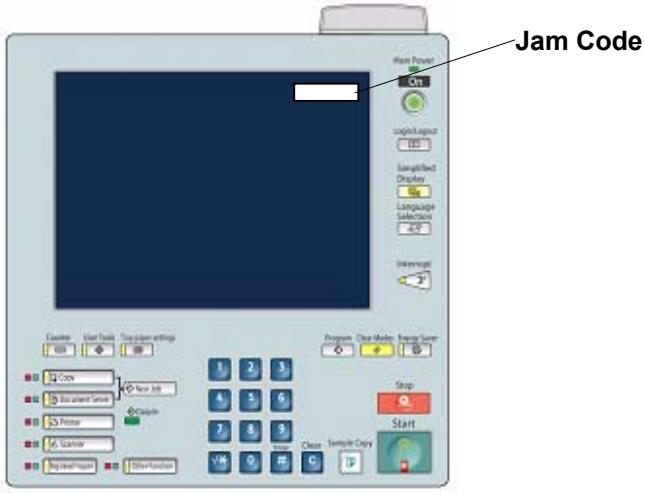
TCRUTS REV NEW3.JPG

1.5 JAM CODE 21

When a jam occurs:

- A jam code appears in the upper right corner of the display.
- The number indicates the location of the jam.



TCRUTS11.BMP

If Jam Code 21 appears:

- This means an accordion or wrap jam has occurred in the fusing unit. **The fusing unit must be replaced.**
- If Jam Code 21 appears again after replacing the fusing unit, call for service.