# FB10000 Error Messages Troubleshooting

Error ID: 1113: IDS - Overflow in (color) main tank.

Error Severity: Warning

Error ID: 66023 - Overflow in **black** main tank

Error ID: 66028 - Overflow in light magenta main tank

Error ID: 66033 - Overflow in light cyan main tank

Error ID: 66008 - Overflow in cyan main tank

Error ID: 66013 - Overflow in magenta main tank

Error ID: 66018 - Overflow in <u>vellow</u> main tank

# FB10000 Error Messages Troubleshooting

Error ID: 66023: IDS - Overflow in black main tank.

Error Severity: Critical

## **Possible Causes**

Regular overflow event in main ink tank Black main ink pump works continuously DI9371(1MM3) B&R control module is faulty Black main tank overflow floater sensor is faulty Black main tank overflow floater problem along wiring path The MM4331(1DI4) B&R module is faulty





# **Recommended Actions**

## Drain black main ink tank

- 1. Attach a female CPC quick connector (PN CX145-06740) to a 40cm x0.8 cm diam. ink tube.
- 2. Connect the CPC connector to the male connector at the bottom of the main tank and direct the other end of the pipe into an appropriate collecting ink container.
- 3. Let the ink flow freely until the ink level in the main tank reaches the correct level.
- 4. If the error persists, move to the next step.

# Check the black main tank ink pump and its wiring path

The black main tank ink pump will work continuously when shorted, or when the B&R module to which it is connected constantly triggers the pump activation and therefore is faulty.

- 5. In **Control Tools**, activate and deactivate the **K** main tank pump.
- 6. If the pump reacts to your commands, this means that the pump and its wiring path are OK and that you should enquire the black overflow floater sensor and its wiring path down to the MM4331 B&R [1MM3] control module (included).
- 7. If the Black pump does not respond to your commands and continues working continuously, check the pump and its wiring path down to the B&R module as described below.
- 8. If the wiring path is OK then check the MM4331 [1MM3] B&R control module itself.
- 9. If the B&R module does not respond to your Control Tools commands and continuously activates the pump, this indicates that the B&R module is faulty and <u>should be replaced</u>.

# Tank drain – CPC quick connector



### FB10000 Error Messages Troubleshooting

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI9371	DI937



#### MM4331 B&R module [1MM3] to which the main tank ink pump is connected through cable CX161-03030



lowcha

## The MM4331 B&R module [1MM3] is faulty – replace module

Each B&R control module comprises three components: Base, Bus Unit (BU), and Terminal block (12 PINS) as shown below. When we say replacing a B&R module, we mean replacing its Bus Unit which is the "heart" of the module.

1. Go to the LEC and locate the MM4331 B&R module labeled MM3.

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM12	1BM13
Bus Controller <sup>I</sup> X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331 M	44331	DI9371	DI9371	DI9371



- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.

Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

7. If none of the above steps solved the problem, contact your HP service specialist.

## The black main tank overflow floater sensor is faulty

Assuming that you checked the black main tank ink pump and its wiring and to the B&R module (included the module) are all OK, then the problem is probably related to the black (K) overflow floater sensor, to its wiring path or to the B&R control module to which it is connected.

- 1. In Control Tools check the K overflow floater sensor status:
  - Red light indicates real ink overflow
  - Gray light indicates that no overflow was detected.

The indication turns red also when the sensor is mechanically stuck or if there is a problem in its wiring path due to the fact that its circuit is set as NC.

- 2. Verify that the floater is not mechanical stuck.
- 3. Check continuity along the floater wiring path to the B&R module as described below.
- 4. If all components down to the B&R module are OK. Check the DI9371 B&R module labeled 1DI4 and replace it if required.







5. Check wiring path continuity from floater to B&R control module along cable CX161-02860 (from J4 Black panel to DI9371 [1DI4].

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	D08332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	.DI9371



DI9371 B&R module [1DI4] to which black main tank overflow sensor is connected through cable CX161-02860



## The DI9371 [1DI4] B&R module is faulty – replace module

Each B&R control module comprises three components: Base [4], Bus Unit (BU)[3], and Terminal block (12 PINS) [2]as shown below. When we say replacing a B&R module, we mean replacing only its Bus Unit which is the "configurable heart" of the module.

1. Go to the LEC and locate the DI9371 B&R control module labeled 1DI4

1BM1

1DO1

1BM2

1D02

1BM3

1DO4

1BM5

1BM6

DI9371 DO8332 DO8332 DO8332 DO8332 DO8332 MM4331 MM4331 MM4331 MM4331 DI9371 DI937

1BC1

Controller X20BC0083

1BB1

Bus

- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.

1BM4

- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.

1 MM1

1BM7

1MM2

1BM8

1MM3

1BM9

1MM4

1BM10

1DI2

1BM11

1BM1

1DI4

1BM13

DI9371

- Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
- Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
- Step 3: Plug the new BU (3) into its base (4).
- Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.
- 6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.
  - Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

9

If none of the above steps solved the problem, contact your HP service specialist.





# FB10000 Error Messages Troubleshooting

Error ID: 66028: IDS - Overflow in light magenta main tank.

# Error Severity: Critical

# **Possible Causes**

Real overflow event in main ink tank - drain main ink tank

<u>No real ink overflow – wrong reading due to main tank floater sensor problem</u>

Real overflow due to main ink pump stuck on continuous pumping

No real ink overflow – wrong reading due to faulty MM4331 (1MM3) B&R control module

No real ink overflow – wrong reading due to faulty DI9371 (1DI4) B&R module

No real ink Overflow – wrong reading due to wiring disconnection





# **Recommended Actions**

## Real Overflow event - Drain light magenta main ink tank

- 1. Attach a female CPC quick connector (PN CX145-06740) to a 40cm x0.8 cm diam. ink tube.
- 2. Connect the CPC connector to the male connector at the bottom of the main tank and direct the other end of the pipe into an appropriate collecting ink container.
- 3. Let the ink flow freely until the ink level in the main tank reaches the correct level.
- 4. If the error persists, move to the next step.

## Check the light magenta main tank ink pump and its wiring path

The light magenta main tank ink pump will work continuously when shorted, or when the module to which it is connected constantly triggers the pump activation and therefore is faulty.

- 1. In **Control Tools**, activate and deactivate the LM main tank pump.
- 2. If the pump reacts to your commands, this means that the pump and its wiring path are OK and that you should enquire the light magenta overflow floater sensor and its wiring path down to the MM4331 B&R [1MM3] control module (included).
- 3. If the Light magenta pump does not respond to your commands and continues working continuously, check the pump and its wiring path down to the B&R module as described below.
- 4. If the wiring path is OK then check the MM4331 [1MM3] B&R control module itself.
- 5. If the B&R module does not respond to your Control Tools commands and continuously activates the pump, this indicates that the B&R module is faulty and <u>should be replaced</u>.





1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI9371	DI9371



## Wiring path from main ink pump to MM4331 [1MM3] B&R module through cable CX161-03030 is disconnected



4

# The MM4331 B&R module [1MM3] is faulty – replace module

Each B&R control module comprises three components: Base, Bus Unit (BU), and Terminal block (12 PINS) as shown below. When we say replacing a B&R module, we mean replacing its Bus Unit which is the "heart" of the module.

1. Go to the LEC and locate the MM4331 B&R module labeled MM3.

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	LMM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	LBM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM 4 3 3 1	MM4331 M	4331	DI9371	DI9371	DI9371



- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.

Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

7. If none of the above steps solved the problem, contact your HP service specialist.

## The light magenta main tank overflow floater sensor is faulty

Assuming that you checked the light magenta main tank ink pump and its wiring and to the B&R module (included the module) are all OK, then the problem is probably related to the light magenta (K) overflow floater sensor, to its wiring path or to the B&R control module to which it is connected.

- 1. In Control Tools check the LM overflow floater sensor status:
  - Red light indicates real ink overflow
  - Gray light indicates that no overflow was detected.

The indication turns red also when the sensor is mechanically stuck or if there is a problem in its wiring path due to the fact that its circuit is set as NC.

- 2. Verify that the floater is not mechanical stuck.
- 3. Check continuity along the floater wiring path to the B&R module as described below.
- 4. If all components down to the B&R module are OK. Check the DI9371 B&R module labeled 1DI4 and replace it if required.







5. Check wiring path continuity from floater to B&R control module along cable CX161-02860 (from J4 Light magenta panel to DI9371 [1DI4].

1BC1	1DI1	1D01	1D02	1D03	1DO4	1DO5	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	DI9371



#### DI9371 B&R module [1DI4] to which light magenta main tank overflow sensor is connected through cable CX161-02860



# The DI9371 [1DI4] B&R module is faulty – replace module

Each B&R control module comprises three components: Base [4], Bus Unit (BU)[3], and Terminal block (12 PINS) [2]as shown below. When we say replacing a B&R module, we mean replacing only its Bus Unit which is the "configurable heart" of the module.

1. Go to the LEC and locate the DI9371 B&R control module labeled 1DI4

													_	
1BC1	1DI1	1D01	1D02	1D03	1DO4	1DO5	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1	DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1 E	3M13
Bus Controller X20BC0083	DI9371	D08332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	. DI	9371

- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



- 6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.
  - Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

If none of the above steps solved the problem, contact your HP service specialist.





# FB10000 Error Messages Troubleshooting

Error ID: 66033: IDS - Overflow in light cyan main tank.

# Error Severity: Critical

# **Possible Causes**

Real overflow event in main ink tank - drain main ink tank

<u>No real ink overflow – wrong reading due to main tank floater sensor problem</u>

Real overflow due to main ink pump stuck on continuous pumping

<u>No real ink overflow – wrong reading due to faulty MM4331 (1MM3) B&R control module</u>

No real ink overflow – wrong reading due to faulty DI9371 (1DI4) B&R module

No real ink Overflow – wrong reading due to wiring disconnection





# **Recommended Actions**

## Real Overflow event - Drain light cyan main ink tank

- 1. Attach a female CPC quick connector (PN CX145-06740) to a 40cm x0.8 cm diam. ink tube.
- 2. Connect the CPC connector to the male connector at the bottom of the main tank and direct the other end of the pipe into an appropriate collecting ink container.
- 3. Let the ink flow freely until the ink level in the main tank reaches the correct level.
- 4. If the error persists, move to the next step.

## Check the light cyan main tank ink pump and its wiring path

The light cyan main tank ink pump will work continuously when shorted, or when the B&R module to which it is connected constantly triggers the pump activation and therefore is faulty.

- 1. In **Control Tools**, activate and deactivate the LC main tank pump.
- 2. If the pump reacts to your commands, this means that the pump and its wiring path are OK and that you should enquire the light cyan overflow floater sensor and its wiring path down to the MM4331 B&R [1MM3] control module (included).
- 3. If the Light cyan pump does not respond to your commands and continues working continuously, check the pump and its wiring path down to the B&R module as described below.
- 4. If the wiring path is OK then check the MM4331 [1MM3] B&R control module itself.
- 5. If the B&R module does not respond to your Control Tools commands and continuously activates the pump, this indicates that the B&R module is faulty and <u>should be replaced</u>.





1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI9371	DI9371



## Wiring path from main ink pump to MM4331 [1MM3] B&R module through cable CX161-03030 is disconnected



# The MM4331 B&R module [1MM3] is faulty – replace module

Each B&R control module comprises three components: Base, Bus Unit (BU), and Terminal block (12 PINS) as shown below. When we say replacing a B&R module, we mean replacing its Bus Unit which is the "heart" of the module.

1. Go to the LEC and locate the MM4331 B&R module labeled MM3.

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	LMM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	LBM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM 4 3 3 1	MM4331 M	4331	DI9371	DI9371	DI9371



- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.

Error ID: 66033: IDS - Overflow in light cyan main tank.

Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

7. If none of the above steps solved the problem, contact your HP service specialist.

## The light cyan main tank overflow floater sensor is faulty

Assuming that you checked the light cyan main tank ink pump and its wiring and to the B&R module (included the module) are all OK, then the problem is probably related to the light cyan LC overflow floater sensor, to its wiring path or to the B&R control module to which it is connected.

- 1. In Control Tools check the LC overflow floater sensor status:
  - Red light indicates real ink overflow
  - Gray light indicates that no overflow was detected.

The indication turns red also when the sensor is mechanically stuck or if there is a problem in its wiring path due to the fact that its circuit is set as NC.

- 2. Verify that the floater is not mechanical stuck.
- 3. Check continuity along the floater wiring path to the B&R module as described below.
- 4. If all components down to the B&R module are OK. Check the DI9371 B&R module labeled 1DI4 and replace it if required.





6



5. Check wiring path continuity from floater to B&R control module along cable CX161-02860 (from J4 Light cyan panel to DI9371 [1DI4].

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	.DI9371



#### DI9371 B&R module [1DI4] to which light cyan main tank overflow sensor is connected through cable CX161-02860



## The DI9371 [1DI4] B&R module is faulty – replace module

Each B&R control module comprises three components: Base [4], Bus Unit (BU)[3], and Terminal block (12 PINS) [2]as shown below. When we say replacing a B&R module, we mean replacing only its Bus Unit which is the "configurable heart" of the module.

1. Go to the LEC and locate the DI9371 B&R control module labeled 1DI4

1BM1

DI9371

1BB1

2.

3.

4.

Controller X20BC0083

1 MM 1

1BM7

D08332 D08332 D08332 D08332 D08332 MM4331 MM4331 MM4331 MM4331 D19371 D19371 D19371

Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.

1BM8

1BM9

1BM10

1BM11

1 BM1

1BM13

Step 3: Plug the new BU (3) into its base (4).

from its base (4).

Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.

Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.

6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.

Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

If none of the above steps solved the problem, contact your HP service specialist.







1BC1 1D11 1D01 1D02 1D03 1D04 1D

1BM2

1BM3

1BM4

Before replacing a module BU, turn the machine power OFF.

Release the module terminal block with its wires, as shown below.

Pull the module Bus Unit of its base and replace it by a new one.

5. Plug back the terminal block into the Bus Unit until you hear a click.

1BM5

1BM6

# FB10000 Error Messages Troubleshooting

Error ID: 66008: IDS - Overflow in cyan main tank.

# Error Severity: Critical

# **Possible Causes**

Real overflow event in main ink tank - drain main ink tank

<u>No real ink overflow – wrong reading due to main tank floater sensor problem</u>

Real overflow due to main ink pump stuck on continuous pumping

No real ink overflow – wrong reading due to faulty MM4331 (1MM3) B&R control module

No real ink overflow – wrong reading due to faulty DI9371 (1DI4) B&R module

No real ink Overflow – wrong reading due to wiring disconnection





# **Recommended Actions**

## Real Overflow event - Drain cyan main ink tank

- 1. Attach a female CPC quick connector (PN CX145-06740) to a 40cm x0.8 cm diam. ink tube.
- 2. Connect the CPC connector to the male connector at the bottom of the main tank and direct the other end of the pipe into an appropriate collecting ink container.
- 3. Let the ink flow freely until the ink level in the main tank reaches the correct level.
- 4. If the error persists, move to the next step.

## Check the cyan main tank ink pump and its wiring path

The cyan main tank ink pump will work continuously when shorted, or when the B&R module to which it is connected constantly triggers the pump activation and therefore is faulty.

- 1. In **Control Tools**, activate and deactivate the CYAN main tank pump.
- 2. If the pump reacts to your commands, this means that the pump and its wiring path are OK and that you should enquire the cyan overflow floater sensor and its wiring path down to the MM4331 B&R [1MM3] control module (included).
- 3. If the Cyan pump does not respond to your commands and continues working continuously, check the pump and its wiring path down to the B&R module as described below.
- 4. If the wiring path is OK then check the MM4331 [1MM3] B&R control module itself.
- 5. If the B&R module does not respond to your Control Tools commands and continuously activates the pump, this indicates that the B&R module is faulty and <u>should be replaced</u>.





1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI9371	DI9371



## Wiring path from main ink pump to MM4331 [1MM3] B&R module through cable CX161-03030 is disconnected



lowchai

## The MM4331 B&R module [1MM3] is faulty – replace module

Each B&R control module comprises three components: Base, Bus Unit (BU), and Terminal block (12 PINS) as shown below. When we say replacing a B&R module, we mean replacing its Bus Unit which is the "heart" of the module.

1. Go to the LEC and locate the MM4331 B&R module labeled MM3.

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	LMM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	LBM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM 4 3 3 1	MM4331 M	4331	DI9371	DI9371	DI9371



- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.

Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

7. If none of the above steps solved the problem, contact your HP service specialist.

## The cyan main tank overflow floater sensor is faulty

Assuming that you checked the cyan main tank ink pump and its wiring and to the B&R module (included the module) are all OK, then the problem is probably related to the cyan overflow floater sensor, to its wiring path or to the B&R control module to which it is connected.

- 1. In Control Tools check the CYAN overflow floater sensor status:
  - Red light indicates real ink overflow
  - Gray light indicates that no overflow was detected.

The indication turns red also when the sensor is mechanically stuck or if there is a problem in its wiring path due to the fact that its circuit is set as NC.

- 2. Verify that the floater is not mechanical stuck.
- 3. Check continuity along the floater wiring path to the B&R module as described below.
- 4. If all components down to the B&R module are OK. Check the DI9371 B&R module labeled 1DI4 and replace it if required.







5. Check wiring path continuity from floater to B&R control module along cable CX161-02860 (from J4 Cyan panel to DI9371 [1DI4].

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	.DI9371



#### DI9371 B&R module [1DI4] to which cyan main tank overflow sensor is connected through cable CX161-02860



## The DI9371 [1DI4] B&R module is faulty – replace module

Each B&R control module comprises three components: Base [4], Bus Unit (BU)[3], and Terminal block (12 PINS) [2]as shown below. When we say replacing a B&R module, we mean replacing only its Bus Unit which is the "configurable heart" of the module.

1. Go to the LEC and locate the DI9371 B&R control module labeled 1DI4

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	.DI9371

- Before replacing a module BU, turn the machine power OFF. 2.
- Release the module terminal block with its wires, as shown below. 3.
- Pull the module Bus Unit of its base and replace it by a new one. 4.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.





- Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit. 6.
  - Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

If none of the above steps solved the problem, contact your HP service specialist.

### FB10000 Error Messages Troubleshooting



# FB10000 Error Messages Troubleshooting

Error ID: 66013: IDS - Overflow in magenta main tank.

# Error Severity: Critical

# **Possible Causes**

Real overflow event in main ink tank - drain main ink tank

<u>No real ink overflow – wrong reading due to main tank floater sensor problem</u>

Real overflow due to main ink pump stuck on continuous pumping

No real ink overflow – wrong reading due to faulty MM4331 (1MM3) B&R control module

No real ink overflow – wrong reading due to faulty DI9371 (1DI4) B&R module

No real ink Overflow – wrong reading due to wiring disconnection





# **Recommended Actions**

## Real Overflow event - Drain magenta main ink tank

- 1. Attach a female CPC quick connector (PN CX145-06740) to a 40cm x0.8 cm diam. ink tube.
- 2. Connect the CPC connector to the male connector at the bottom of the main tank and direct the other end of the pipe into an appropriate collecting ink container.
- 3. Let the ink flow freely until the ink level in the main tank reaches the correct level.
- 4. If the error persists, move to the next step.

## Check the magenta main tank ink pump and its wiring path

The magenta main tank ink pump will work continuously when shorted, or when the B&R module to which it is connected constantly triggers the pump activation and therefore is faulty.

- 1. In **Control Tools**, activate and deactivate the magenta main tank pump.
- 2. If the pump reacts to your commands, this means that the pump and its wiring path are OK and that you should enquire the magenta overful floater sensor and its wiring path down to the MM4331 B&R [1MM3] control module (included).
- 3. If the Magenta pump does not respond to your commands and continues working continuously, check the pump and its wiring path down to the B&R module as described below.
- 4. If the wiring path is OK then check the MM4331 [1MM3] B&R control module itself.
- 5. If the B&R module does not respond to your Control Tools commands and continuously activates the pump, this indicates that the B&R module is faulty and <u>should be replaced</u>.





1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM12	1BM13
Bus Controller <sup>I</sup> X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI9371	DI9371



## Wiring path from main ink pump to MM4331 [1MM3] B&R module through cable CX161-03030 is disconnected



## The MM4331 B&R module [1MM3] is faulty – replace module

Each B&R control module comprises three components: Base, Bus Unit (BU), and Terminal block (12 PINS) as shown below. When we say replacing a B&R module, we mean replacing its Bus Unit which is the "heart" of the module.

1. Go to the LEC and locate the MM4331 B&R module labeled MM3.

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	LMM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	LBM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM 4 3 3 1	MM4331 M	4331	DI9371	DI9371	DI9371



- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.

Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

7. If none of the above steps solved the problem, contact your HP service specialist.

## The magenta main tank overflow floater sensor is faulty

Assuming that you checked the magenta main tank ink pump and its wiring and to the B&R module (included the module) are all OK, then the problem is probably related to the magenta overflow floater sensor, to its wiring path or to the B&R control module to which it is connected.

- 1. In Control Tools check the magenta overflow floater sensor status:
  - Red light indicates real ink overflow
  - Gray light indicates that no overflow was detected.

The indication turns red also when the sensor is mechanically stuck or if there is a problem in its wiring path due to the fact that its circuit is set as NC.

6

- 2. Verify that the floater is not mechanical stuck.
- 3. Check continuity along the floater wiring path to the B&R module as described below.
- 4. If all components down to the B&R module are OK. Check the DI9371 B&R module labeled 1DI4 and replace it if required.







5. Check wiring path continuity from floater to B&R control module along cable CX161-02860 (from J4 magenta panel to DI9371 [1DI4].

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	.DI9371



### DI9371 B&R module [1DI4] to which magenta main tank overflow sensor is connected through cable CX161-02860



# The DI9371 [1DI4] B&R module is faulty – replace module

Each B&R control module comprises three components: Base [4], Bus Unit (BU)[3], and Terminal block (12 PINS) [2]as shown below. When we say replacing a B&R module, we mean replacing only its Bus Unit which is the "configurable heart" of the module.

1. Go to the LEC and locate the DI9371 B&R control module labeled 1DI4

1BC1	1DI1	1D01	1D02	1D03	1DO4	1DO5	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937:	DI9371

- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



- 6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.
  - Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

If none of the above steps solved the problem, contact your HP service specialist.





# FB10000 Error Messages Troubleshooting

Error ID: 66018: IDS - Overflow in yellow main tank.

# Error Severity: Critical

# **Possible Causes**

Real overflow event in main ink tank - drain main ink tank

<u>No real ink overflow – wrong reading due to main tank floater sensor problem</u>

Real overflow due to main ink pump stuck on continuous pumping

<u>No real ink overflow – wrong reading due to faulty MM4331 (1MM3) B&R control module</u>

No real ink overflow – wrong reading due to faulty DI9371 (1DI4) B&R module

No real ink Overflow – wrong reading due to wiring disconnection





# **Recommended Actions**

## Real Overflow event - drain yellow main ink tank

- 1. Attach a female CPC quick connector (PN CX145-06740) to a 40cm x0.8 cm diam. ink tube.
- 2. Connect the CPC connector to the male connector at the bottom of the main tank and direct the other end of the pipe into an appropriate collecting ink container.
- 3. Let the ink flow freely until the ink level in the main tank reaches the correct level.
- 4. If the error persists, move to the next step.

## Check the yellow main tank ink pump and its wiring path

The yellow main tank ink pump will work continuously when shorted, or when the B&R module to which it is connected constantly triggers the pump activation and therefore is faulty.

- 1. In **Control Tools**, activate and deactivate the yellow main tank pump.
- 2. If the pump reacts to your commands, this means that the pump and its wiring path are OK and that you should enquire the yellow overflov floater sensor and its wiring path down to the MM4331 B&R [1MM3] control module (included).
- 3. If the Yellow pump does not respond to your commands and continues working continuously, check the pump and its wiring path down to the B&R module as described below.
- 4. If the wiring path is OK then check the MM4331 [1MM3] B&R control module itself.
- 5. If the B&R module does not respond to your Control Tools commands and continuously activates the pump, this indicates that the B&R module is faulty and <u>should be replaced</u>.





1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI9371	DI9371



## Wiring path from main ink pump to MM4331 [1MM3] B&R module through cable CX161-03030 is disconnected



## The MM4331 B&R module [1MM3] is faulty – replace module

Each B&R control module comprises three components: Base, Bus Unit (BU), and Terminal block (12 PINS) as shown below. When we say replacing a B&R module, we mean replacing its Bus Unit which is the "heart" of the module.

1. Go to the LEC and locate the MM4331 B&R module labeled MM3.

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	LMM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	LBM10	1BM11	1BM12	1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM 4 3 3 1	MM4331 M	4331	DI9371	DI9371	DI9371



- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.

Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

7. If none of the above steps solved the problem, contact your HP service specialist.

## The yellow main tank overflow floater sensor is faulty

Assuming that you checked the yellow main tank ink pump and its wiring and to the B&R module (included the module) are all OK, then the problem is probably related to the yellow overflow floater sensor, to its wiring path or to the B&R control module to which it is connected.

- 1. In Control Tools check the yellow overflow floater sensor status:
  - Red light indicates real ink overflow
  - Gray light indicates that no overflow was detected.

The indication turns red also when the sensor is mechanically stuck or if there is a problem in its wiring path due to the fact that its circuit is set as NC.

- 2. Verify that the floater is not mechanical stuck.
- 3. Check continuity along the floater wiring path to the B&R module as described below.
- 4. If all components down to the B&R module are OK. Check the DI9371 B&R module labeled 1DI4 and replace it if required.







5. Check wiring path continuity from floater to B&R control module along cable CX161-02860 (from J4 yellow panel to DI9371 [1DI4].

1BC1	1DI1	1D01	1D02	1D03	1DO4	1D05	1MM1	1MM2	1MM3	1MM4	1DI2	1DI3	1DI4
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937	.DI9371



### DI9371 B&R module [1DI4] to which yellow main tank overflow sensor is connected through cable CX161-02860



# The DI9371 [1DI4] B&R module is faulty – replace module

Each B&R control module comprises three components: Base [4], Bus Unit (BU)[3], and Terminal block (12 PINS) [2]as shown below. When we say replacing a B&R module, we mean replacing only its Bus Unit which is the "configurable heart" of the module.

1. Go to the LEC and locate the DI9371 B&R control module labeled 1DI4

overnow in yearon main tank.	
	-

IBCI	1011	1001	1002	1003	1004	1005	IMMI	1MM2	1 MM 3	1MM4	1012	1013	1D14
1BB1	1BM1	1BM2	1BM3	1BM4	1BM5	1BM6	1BM7	1BM8	1BM9	1BM10	1BM11	1BM1	2 1BM13
Bus Controller X20BC0083	DI9371	DO8332	DO8332	DO8332	DO8332	DO8332	MM4331	MM4331	MM4331	MM4331	DI9371	DI937.	.DI9371

- 2. Before replacing a module BU, turn the machine power OFF.
- 3. Release the module terminal block with its wires, as shown below.
- 4. Pull the module Bus Unit of its base and replace it by a new one.
- 5. Plug back the terminal block into the Bus Unit until you hear a click. Upon turning the machine on, the R/E led will blink green once, signaling that it has detected the new BU.
  - Step 1: Press the latch (1) on top of the TB (2) and unplug the TB from the BU to which it is attached.
  - Step 2: Press the latch (5) on top of the BU (3) and unplug it from its base (4).
  - Step 3: Plug the new BU (3) into its base (4).
  - Step 4: Plug back the TB (2) into the new Bus Unit (3) until you hear a click.



- 6. Turn the machine on and let the B&R control PLC automatically configure the new Bus Unit.
  - Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes. If the PLC LED continues blinking orange once every 5 seconds this indicates that it failed to configure the new module.

If none of the above steps solved the problem, contact your HP service specialist.



