

CAM Mis-position 09:?? Error (Rio 2 / Tango 2 / Avalon / Rio 2e / Tango 2e / Tango +L)

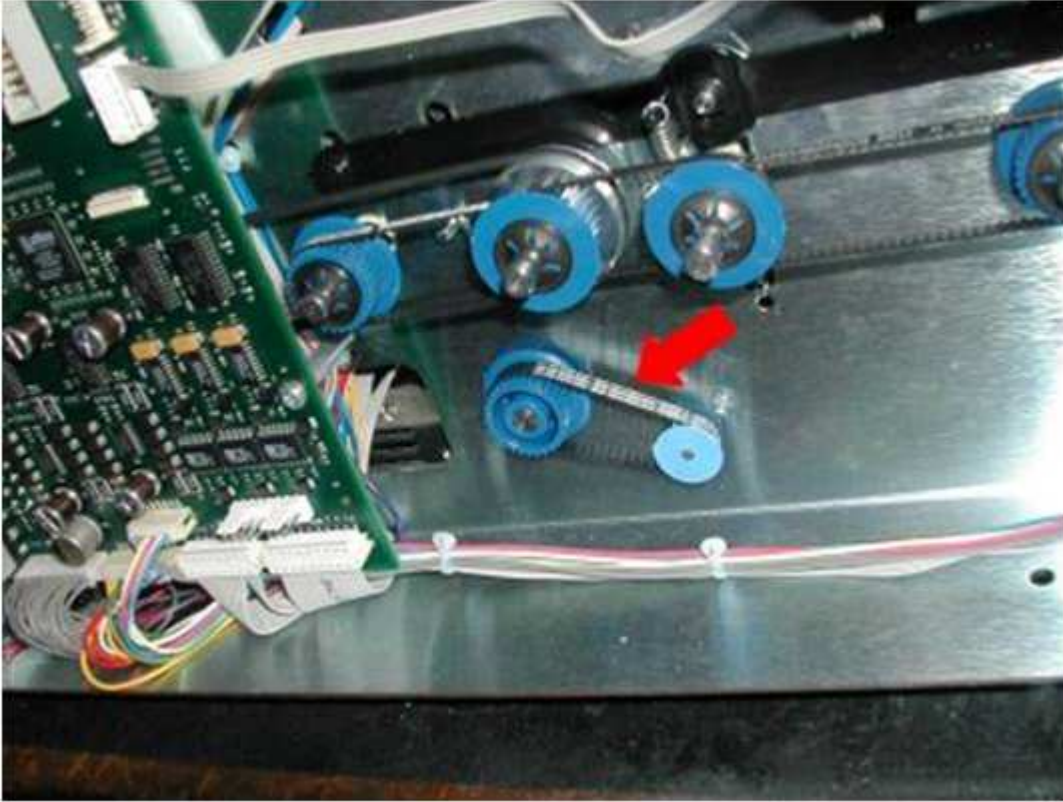
1. Belt / Pulley Problem:

Using a No. 1 Pozidrive screwdriver, **remove the left-hand side panel.**

There are two screws in the side of the panel, and two at the rear.

Keep the side screws separate (**they are longer, and a slightly different thread type**).

The **CAM** drive is shown below;



This is as it should look normally;



You can clearly see the shiny end of the motor shaft protruding from the pulley.

If the belt has come off:

Refit it as in the picture above.

Check that the cam motor pulley (the smaller one) is pushed fully on to the motor shaft.
The end of the motor shaft should just protrude from the pulley (see above).

If the cam motor pulley had come off:

The pulley is only designed to be fitted once. You can by all means push it back onto the motor shaft as a temporary repair.

Add a drop of superglue on the end of the shaft to prevent the pulley falling off again.

However, as a permanent repair, we can send you a **new replacement pulley**.

This simply pushes onto the cam motor shaft as shown above.

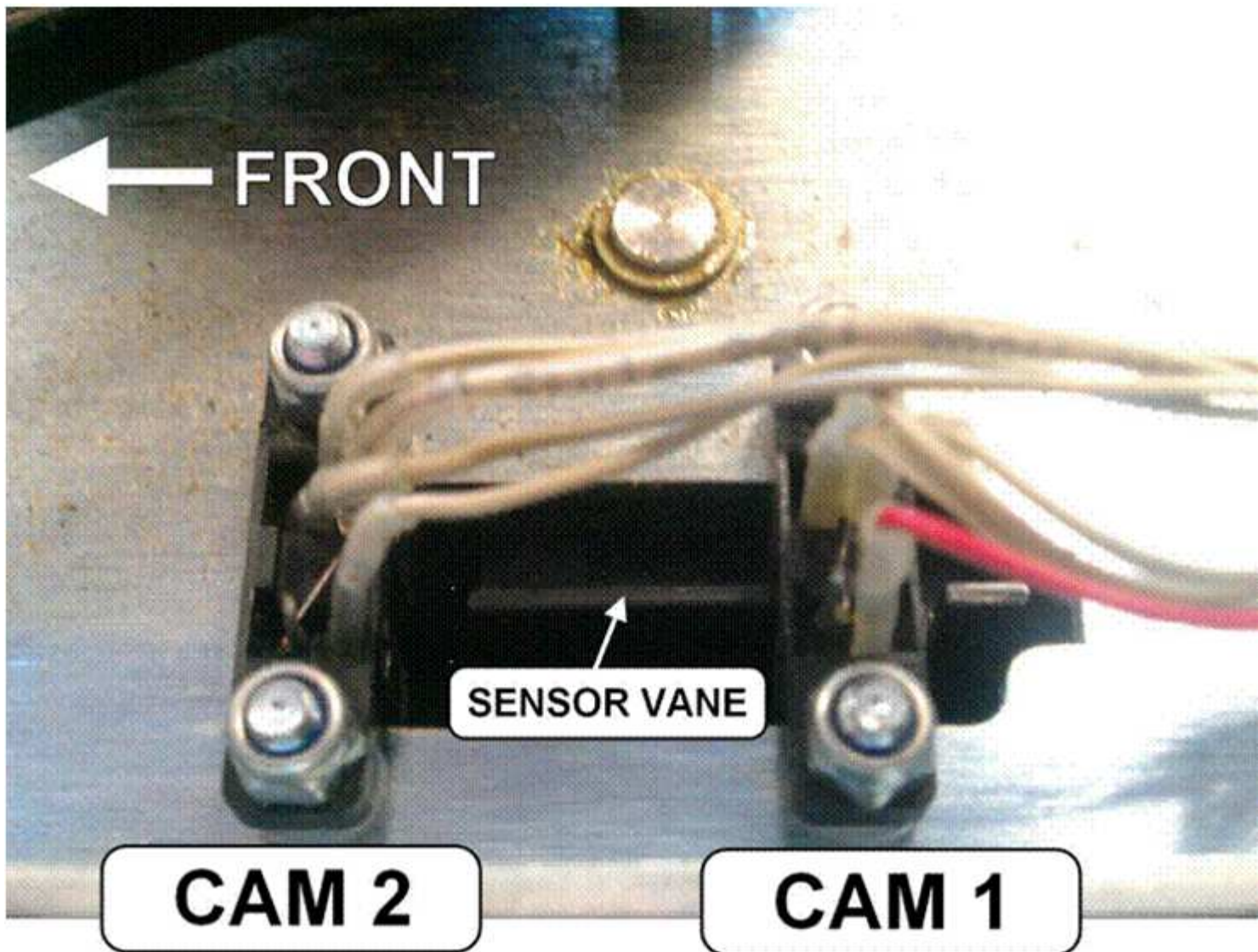
2. Motor / Sensor Problem:

Remove the right-hand side panel.

There are two thru-beam opto sensors for the printhead cam system;

CAM1 and CAM2.

These are located on the opposite side of the printer (right-hand side);



To test the sensors:

Ensure you are running the very latest firmware version (**V3.33**)

You will need to download and install the **ID Card Printer Support Utility**
(the latest version is currently **V3.47**)

Download both the firmware and the support utility here;

<http://www.magicardonline.net>

You will need to enter your printer's serial number in the **QuickSearch** box

It is under **Support Tools**

Ensure the printer is switched on and connected to the PC.

On the utility select the **Statistics / Commands** tab.

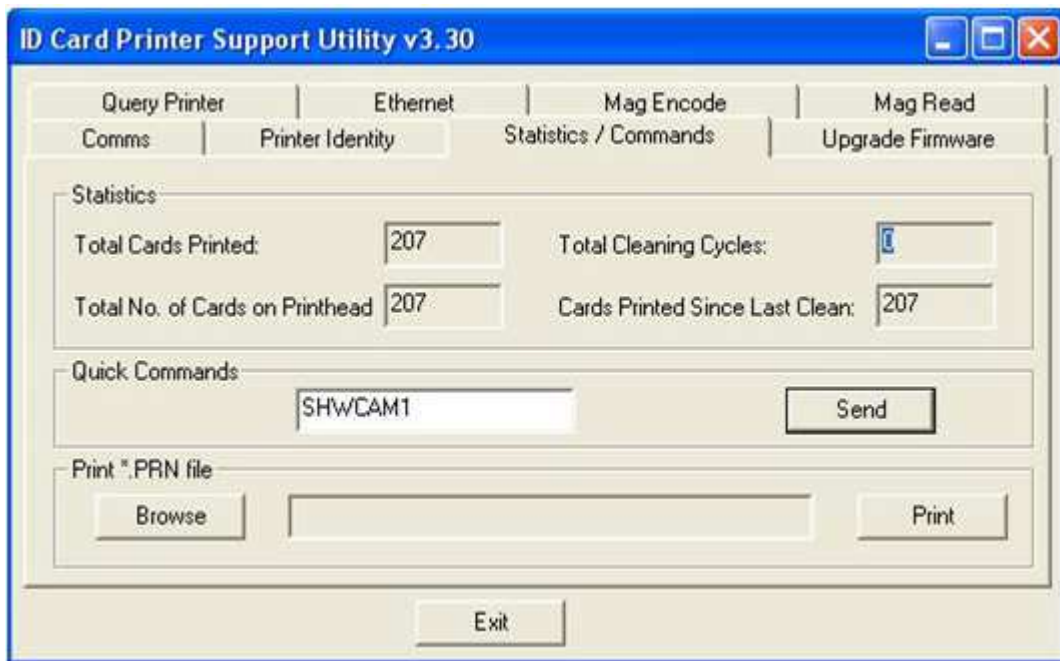
The following **Quick Commands** will help you;

SHWON The LCD display will display the state of all the printer's inputs. (the two cam sensors are 'C' and 'c').

SHWCAM1 This will run the CAM motor. The printer's Green LED will go OFF when the vane blocks CAM 1 sensor.

SHWCAM2 This will run the CAM motor. The printer's Green LED will go OFF when the vane blocks CAM 2 sensor.

SHWOFF End the test. The motor will stop running.



If the **CAM motor is not running** when you send either the **SHWCAM1** or **SHWCAM2** command;

Remove the CAM drive belt.

Send the quick command again (either SHWCAM1 or SHWCAM2)

Does the motor run now?

If the motor does run;

There may be a foreign body within the printer mechanism.

Check inside and remove anything which has dropped inside the printer.

If the motor does NOT run;

There may be a fault with the CAM motor.

This can either be a short-circuit (NOTE! This might also have damaged the control PCB).

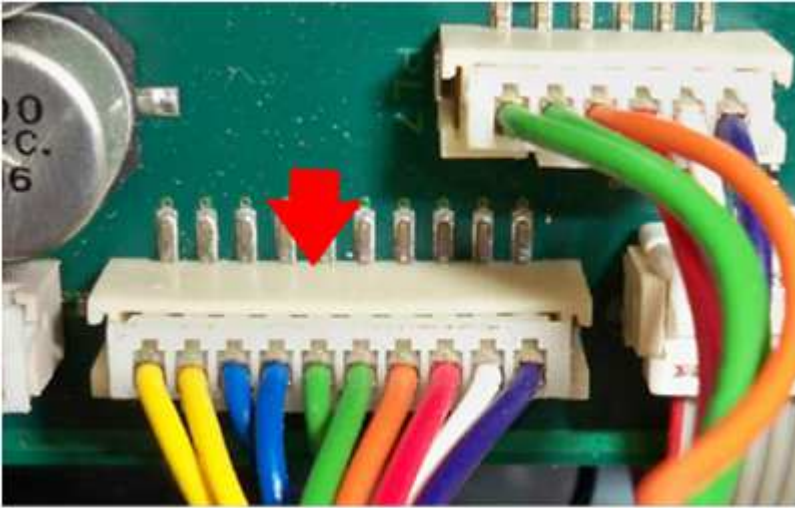
In this case, the **CAM motor AND the control PCB should be replaced.**

**** This may not be economically viable on an older Rio 2e / Tango 2e printer. ****

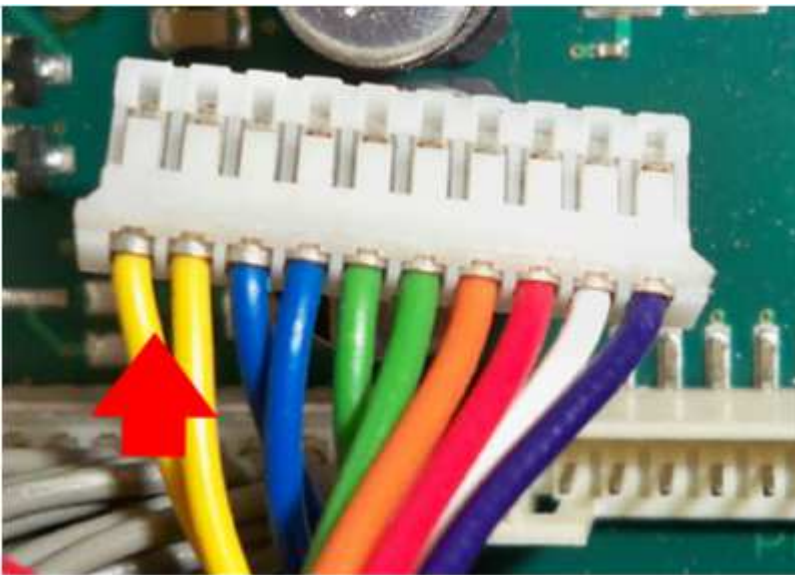
Or it may be open circuit (no resistance).

Checking the resistance of the CAM motor is difficult as it is inside the print engine.

A rough check can be mad by disconnecting the motor power connector (PL8);



Then measure the resistance between the Yellow wires (CAM motor);



The resistance should normally be between 80 and 120Ω.

Hopefully after running through the above checks, the exact cause of the problem should be known.