

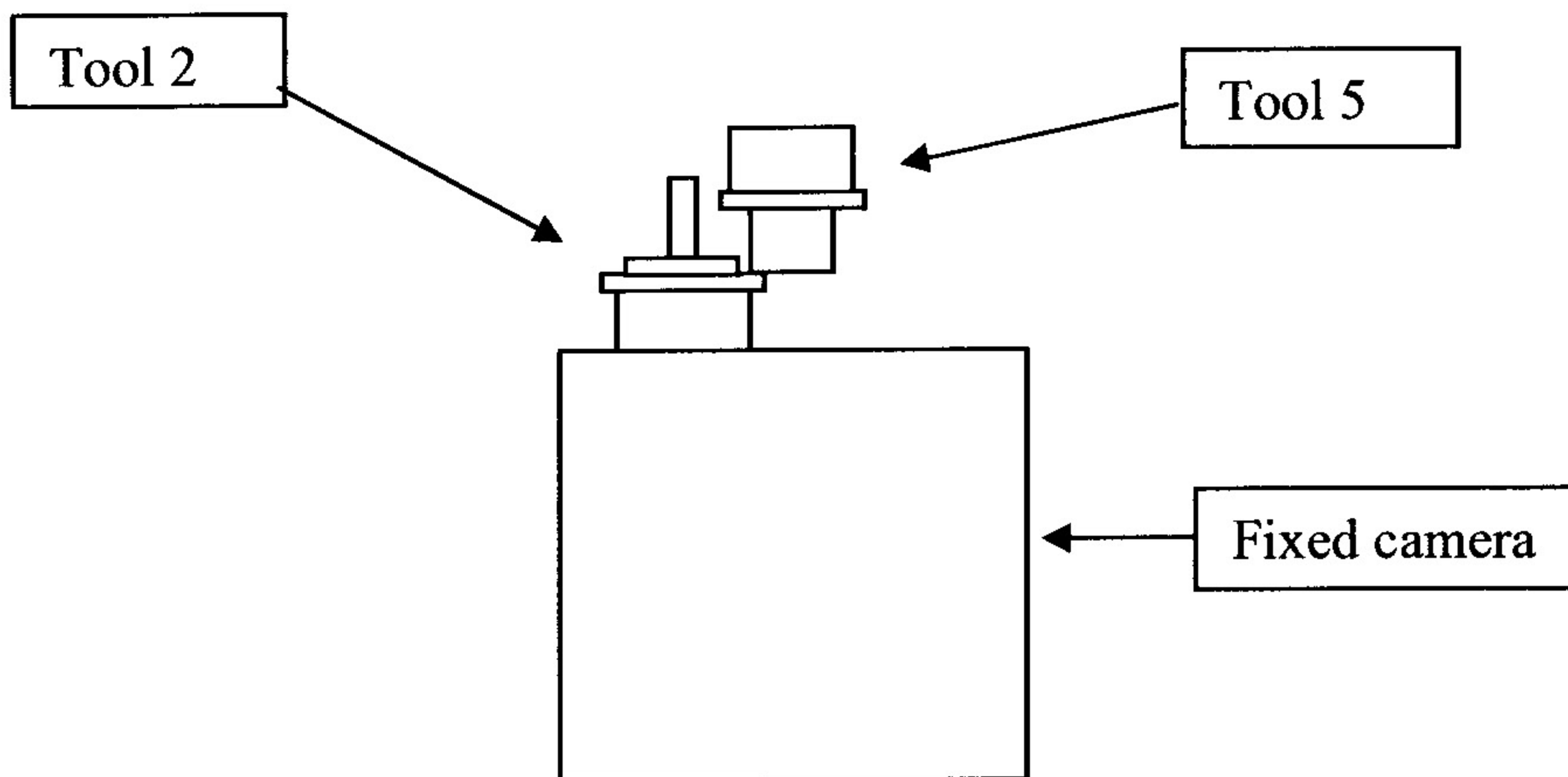
## RV Camera calibration

RV PLACE

Go into 'Factory Settings'. TOOL LOADED.

### SET FOCUS - CAMERA 2 (If RV1s machine it will be camera 1)

1. Click 'Set Focus - Cam 2'. The head will move to the fixed camera.
2. Put tool 5 onto the tool adaptor and tool 2 reversed on to the camera lens cover.
3. Drive tool 5 (if necessary) using the up/down arrows controls (bottom right corner of the screen) until the top of tool 5 rests on the flat flange of tool 2 (as per diagram).



4. Remove tool 2.
5. Click 'Toggle Real Mode' adjust the threshold until you get a good round image (remember the original setting as you will need to put this back after the calibration or your CDF settings will all change). E.G. - 120
6. Click 'Continue'. It will then ask if you want to 'Save new focus height – YES/NO'.
7. Click 'YES'.

### SET CENTRE - CAMERA 2 (If RV1s machine it will be camera 1)

1. Click 'Set centre - camera 2'. It will ask 'Set centre – YES/NO'. Click 'YES'.
2. It will ask 'Move to current centre – YES/NO'. Click 'YES'.
3. It then checks centres and gives you an X-Y shift. Click 'OK'. It will repeat the operation and give you another X-Y shift result (hopefully the shift is smaller). Click 'OK' again. Keep doing this until the X-Y shift = 0.
4. It will ask 'Save new centres – YES/NO'. Click 'YES'.

## **SET RATIO - CAMERA 2 (If RV1s machine it will be camera 1)**

1. Click 'Set ratio - camera 2'. It will ask 'Set ratio camera 2 – YES/NO'. Click 'YES'.
2. It will ask 'Move to current centre – YES/NO'. Click 'YES'.
3. It will ask 'Ready'. Click 'OK'.
4. It will give you a set of ratio results.

For example: X size = 468, Y size = 466. X ratio=0.641, Y ratio=0.644.

If the readings are 468 – 478 or a greater difference, return to 'Set Focus - Camera 2'.

5. If all is fine, click 'OK'.
6. It will ask 'Save new ratio – YES/NO'. Click 'YES'.
7. It will then give you a ratio test result, e.g. X size = 300, Y size = 300.
8. Click 'OK'.

Remember to change threshold back to original settings.

## **SET FOCUS - CAMERA 1 (for RV4s machines only)**

1. Manually put tool 5 onto the tool adaptor.
2. Click 'Set focus - camera 1'. It will ask 'Set focus camera 1 – YES/NO'. Click 'YES'
3. The head should move up and you will see the tool (focus shouldn't need adjusting).
4. Click 'Toggle Real Mode' adjust the threshold until you get a good round image (remember the original setting as you will need to put this back after the calibration or your CDF settings will all change). E.G. = 60
5. Click 'Continue'. It will ask 'Save new focus height'. Click 'OK'

## **SET CENTRE - CAMERA 1 (for RV4s machines only)**

1. Click 'Set centre - camera 1'. It will ask 'Set centre camera 1 – YES/NO'. Click 'YES'.
2. It will ask 'Move to current centre – YES/NO'. Click 'YES'.
3. It then checks centres and gives you an X-Y shift. Click 'OK'.
4. It will ask 'Save new centres – YES/NO'. Click 'YES'.

## **SET RATIO - CAMERA 1 (for RV4s machines only)**

1. Click 'Set ratio - camera 1'. It will ask 'Set ratio camera 1 – YES/NO'. Click 'YES'.
2. It will ask 'Ready'. Click 'OK'.

3. Variables will be the same/near as setting camera 2. Click 'OK'.
4. It will ask 'Save new ratio – YES/NO'. Click 'YES'.
5. It will then give you a ratio test result, e.g. X size = 300, Y size = 300.
6. Click 'OK'. Remove tool 5 from tool adaptor.

Remember to change threshold back to original settings.

Exit Factory setting and save settings.