Adjusting the Home Position On The Y Axis.

Overview

The location of the Y axis home position sensor has an effect on 3 parameters:

1. P005 Limit +
2. P006 Limit –
3. P047 Reference Shift Position

If the sensor is moved all 3 parameters may need to be changed.

If the spindle is changed the sensor will have been moved so all 3 parameters will need to be adjusted.

Setup

To adjust the Y0 position on the Y Axis follow these steps.

Place a gage pin into the spindle tool and load the tool into the spindle.

Place a piece of stock into the main spindle and turn a clean diameter preferably at a full size (20mm or 24mm etc).

Home the Y axis. As it homes on the switch you will see the axis move away from you towards the main spindle center line, this is the parameter P047 REFSHIFT at work.

The center position is controlled by this parameter.

When the Y axis has homed, touch off the Side of the stock using a shim to check the position.

WARNING:

Be very careful to not side load the live spindle.
Always wind the Z axis when moving from one side to the other.
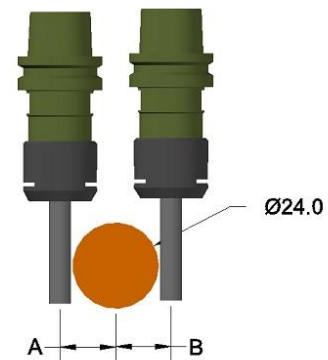

Write down the Y- value.

Touch off the rear side, write down the Y+ value.

Subtract the smaller value from the larger value.

This gives the difference from Center.

Adjust the P047 parameter by this value.

Re home the Y axis and retest the position. Repeat this until both sides are equal.

Adjusting the Y axis limit parameters.

Overview

The limit parameters set the electronic boundaries of the Y axis.

When the REFSHIFT parameter has been set we can set the limit parameters.

Setup

Home the Y axis.

Press the Emergency Stop button, this cuts power to the servo's.

Push the Y axis away from you until you touch the rubber stop.

Turn off the Emergency Stop and write down the Y+ value

Press the Emergency Stop button, this cuts power to the servo's.

Pul the Y axis towards you until you touch the rubber stop.

Turn off the Emergency Stop and write down the Y- value

These values will be in the range of 85 to 95mm in the + direction

And -60-70 in the – direction.

Round down the values by 1mm

So if the value is 95.5676 set the limit to 94.00

Enter the values into parameters P005 & P006

Press SHIFT then RESET to reboot the control and load the new set values for the limits.

Re home the Y axis and move the slide with the handle wheel to its limits, the slide motion should stop and a message should show in the lower left corner of the screen saying axis limit

If the servo sounds like it is loading (a change in pitch) reduce the value of the limit parameter,

Reboot again and retest the limit.

Adjusting the Y axis limit parameters.

Worksheet

Use this as a guide to calculating the P047 Y axis shift position