WinMulti Setup File - 'sawgrip'

Purpose and specification of the sawgrip.saw file

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Original setup

On early ZX5s the saw infeed backfence consisted of a number of short fences dotted along the length of the roller bed lift. Following installation, the machine was prone to mis-grips on some profile lengths, particularly if they were slightly bowed. This was traced to offcut lengths where the grip holes were a distance away from the nearest backfence. This allowed the profile to bow either in front or behind the fence position, therefore the holes did not line up to the gripper pins.

To overcome this, the software was modified to push the profile to the next nearest backfence, thus straightening the profile between the channel bar and backfence and aligning the grip holes:
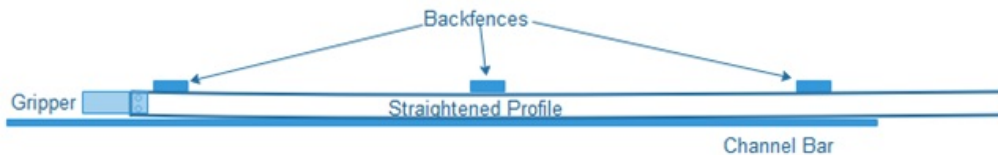
The positional information for the backfence position was hard-coded into the back end software.

Enhanced setup (Z066+)

To improve the situation, the backfences in later models have been extended to cover more area, thus reducing the need for the pusher to move forwards, making the positions that are "hard coded" redundant.
The latest software (6.3.62.0+) has a feature to override the default positions and allow user generated length dependant positions to be stored in a file sawgrip.saw. This file follows exactly the same format and structure as the sloadpos.saw file (used for the unloading gripper position on the MH side). NOTE: the "sawLoadDiff" is taken care of internally in the program.

Sawgrip.saw

Consists of a list of lookup lengths, followed by a position the gripper should go to.
Example:

```
0,L1250
3000,L1260
6000,7200
```

The software looks down the list line by line to find the closest length **less than or equal to** the bar length in the fist field. The position is then referenced in the second field.
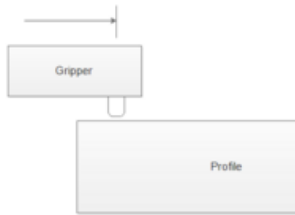
Field	Type	Calculation
1	numerical	Move to the position specified
2	L (Upper Case)	Add the bar length on to the number following the L
3	l (Lower Case)	Add *half* the bar length on to the number following the l

In the above example

Bar Length	Gripper Position
700	1950
2900	4150
3100	4360
5900	7160
6000	7200
6500	7200

Use the sloadpos as a starting point because this file is used to drop off the profile.

Saw Grip Process

Step	Description	Wait for	Notes
1	Channel lock on	pause ph_ps_chanLockOnE	
2	Channel on, build up (check if stuck on->raise alarm)	pressure build up 1 second	
3	Channel lock off, wait	pause ps_channel	
4	Check if gripper is stuck on		check if stuck on->raise alarm
5	Gripper to near end of bar at full speed Calculated from unloadPosition + sawLoadDiff + 50		check if stuck on->raise alarm
6	Gripper to grip position Calculated from sawgrip.saw file + sawLoadDiff	Grip Switch Input	If the gripper does not reach the bar end, the message to press start to try again appears. ℹ️ …This can be resolved by 1. Modify sawLoadDiff to ensure the start position is nearer the bar end 2. If it is still not moving enough to reach the bar end, adjust sawgrip.saw (This should not neeed to be done unless undo-ing alterations to sloadpos.saw and sawgrip.saw) This second grip position is recorded in the saw diagnostics saw file: `07:07:56.484,011,GripLoadPos: 1748.9 sawloadDiff:-620`
8	Gripper on	pause 0.5 sec	

9	Channel lock pulse off to leave a small gap between channel and profile	Pause ph_ps_chanLockOffOnE	
10	Pull back test grip move	Grip Switch Input	If grip switch fail, restart channel and grip procedure