(Commands)

oldvars use old position (previous move) variables and misc. variables.

newvars use new position (current move) variables and misc. variables.

force\_x force the X value to be output next time even if modal.

force\_y force the Y value to be output next time even if modal.

force\_z force the Z value to be output next time even if modal.

force\_xl force the X value of lower contour of 4 Axis part to be output next time even if modal. force\_yl force the Y value of lower contour of 4 Axis part to be output next time even if modal. force\_xu force the X value of upper contour of 4 Axis part to be output next time even if modal. force\_yu force the Y value of upper contour of 4Axis part to be output next time even if modal. force\_u force the U value of upper contour of 4Axis part to be output next time even if modal. force\_v force the V value of upper contour of 4Axis part to be output next time even if modal. memo\_xmove Memorize the current X movement for use later.

memo\_ymove Memorize the current Y movement for use later.

memo\_umove Memorize the current U movement for use later.

memo\_vmove Memorize the current V movement for use later.

memorize\_rethread\_point Output code to memorize current location for auto rethread (Sodick). memorize\_line\_number Memorize sequence number for use later.

memorized\_line\_number Use memorize sequence number.

debug\_on Turns on automatic debug comments in post output.

debug\_off Turns off automatic debug comments in post output.

exit\_if\_glue\_stop Ignore the rest of the current contour if on glue stop. Used for Agie. start\_add\_block\_delete Add block delete to all lines untilstop\_add\_block\_delete is used stop\_add\_block\_delete Stop adding block delete that started from using start\_add\_block\_delete force\_no\_add\_spaces Force no spaces even when default is set to add spaces. default\_add\_spaces Set add spaces back to condition before force\_no\_add\_spaces was called. out\_ctc\_variables Output cutting conditions variables. Usually at the beginning of the program. pass\_specific Output start of pass block (Rough block for rough cut, 1st skim block for 1st skim -etc).

(Part Setup)

absolute\_coord Output code to set coordinates to absolute mode (G90). Code defined in "G -Codes/Absolute Coord:".

incremental\_coord Output code to set coordinates to incremental mode (G91). Code defined in -"G Codes/Incremental Coord:".

absolute\_coord\_no\_code Set output mode to absolute, do not output G Code. incremental\_coord\_no\_code Set output mode to incremental do no output G Code.

work\_coord Output work coordinates when it changing work pieces. (G54 etc) Code defined in -"G Codes/Work offsets".

pattern\_work\_coord Output work coordinates for pattern contours. (G54 etc) Code defined in "G -Codes/Work offsets".

zero\_set\_xp\_yp Output code to set current work coordinate to programmed zero (G92X\_\_\_Y\_ -\_\_). Code defined in "G Codes/Coord zero set:".

zero\_set\_xr\_yr Output code to set current work coordinate to current cycle start point -(G92X\_\_\_Y\_\_\_). Code defined in "G Codes/Coord zero set:".

zero\_set Output set zero command with out XY values (G92). Code defined in "G Codes/Coord zero set:".

metric\_mode Set output mode to metric.

inch\_mode Set output mode to inch.

metric\_mode\_no\_code Set output mode to metric without G code.

inch\_mode\_no\_code Set output mode to inch without G code.

ref\_plane Output reference plane value with prefix (Charmille). Prefix defined in -"Prefixes/Reference plane".

part\_height Output workpiece height with prefix. Prefix defined in "Prefixes/Part height". machining\_mode Output code for machining mode (no taper, taper, 4axis)

work\_plane\_height Output work plane height. Determined by feature settings (Primary shape or -Stock height, and use of land and taper).

incr\_taper\_height Output incremental taper height from land, or primary feature shape. taper\_height Output taper height.

two\_axis\_with\_taper\_start Output code for two axis taper start.

two\_axis\_with\_taper\_end Output code for two axis taper end.

(Positioning)

xr Output rapid position x with prefix (X1.25) (X prefix hard coded).

yr Output rapid position y with prefix (Y1.25) (Y prefix hard coded).

x\_ur Output upper guide rapid position x with prefix from post question 606.

y\_ur Output upper guide rapid position x with prefix from post question 607.

xr\_no\_output X rapid value to previous move without outputing code.

yr\_no\_output Y rapid value to previous move without outputing code.

xr\_upper Output rapid position x upper guide with prefix (X1.25) (X prefix hard coded).

yr\_upper Output rapid position y upper guide with prefix (Y1.25) (Y prefix hard coded).

zr\_upper Output rapid position z upper guide with prefix (Z1.25) (Z prefix hard coded).

xr\_lower Output rapid position x lower guide with prefix (X1.25) (X prefix hard coded).

yr\_lower Output rapid position y lower guide with prefix (Y1.25) (Y prefix hard coded).

zr\_lower Output rapid position z lower guide with prefix (Z1.25) (Z prefix hard coded).

xh Output home position x with prefix (X1.25) (X prefix hard coded).

yh Output home position y with prefix (Y1.25) (Y prefix hard coded).

xp Output programmed zero x (X\_\_\_). (X prefix hard coded).

yp Output programmed zero y (Y\_\_\_). (Y prefix hard coded).

prev\_x Output previous x (X\_\_\_). (X prefix hard coded).

prev\_y Output previous y (Y\_\_\_). (X prefix hard coded).

z\_position\_up Output code for programmable z position up.

z\_position\_down Output code for programmable z position down.

x\_f Output code for x feed value with prefix. (X prefix hard coded).

y\_f Output code for y feed value with prefix. (Y prefix hard coded).

u\_f Output code for u feed value with prefix. (U prefix hard coded).

v\_f Output code for v feed value with prefix. (V prefix hard coded).

u\_f\_incremental Output code for incremental u feed value with prefix. (U prefix hard coded). v\_f\_incremental Output code for incremental v feed value with prefix. (U prefix hard coded). u\_f\_incr\_change Output code for change in incremental u feed value with prefix. (U prefix hard -coded).

v\_f\_incr\_change Output code for change in incremental v feed value with prefix. (V prefix hard -coded).

u\_f\_angle\_perpend Output code for change in angle perpendicular to xy move (Pos angle to -right)

v\_f\_angle\_parallel Output code for change in angle parallel to xy move (Pos angle forward)

x\_lf Output x value with prefix for lower shape in 4 Axis entity to entity programming.

y\_lf Output y value with prefix for lower shape in 4 Axis entity to entity programming.

x\_uf Output x value with prefix for upper shape in 4 Axis entity to entity programming.

y\_uf Output y value with prefix for upper shape in 4 Axis entity to entity programming. thread\_point\_x Output x value with prefix for thread point.

thread\_point\_y Output y value with prefix for thread point.

x\_start\_hole\_rapid Output x value with prefix for rapid feed to edge ofstart hole. y\_start\_hole\_rapid Output y value with prefix for rapid feed to edge ofstart hole.

first\_rapid\_x Output x value with prefix memorized first rapid point.

first\_rapid\_y Output y value with prefix memorized first rapid point.

first\_rapid\_z Output z value with prefix memorized first rapid point.

x\_first\_cut Output x value with prefix for entrance cut when special cutting conditions are used -to enter contour.

y\_first\_cut Output y value with prefix for entrance cut when special cutting conditions are used to enter contour.

skip\_next\_move Skip next movement in order to output later. Used for line swapping in Agie. output\_xmemo Output the x value that was memorized with memo\_xmove.

output\_ymemo Output the y value that was memorized with memo\_ymove.

output\_umemo Output the u value that was memorized with memo\_xmove.

output\_vmemo Output the v value that was memorized with memo\_xmove.

u0\_on\_no\_taper Output U0.0 on 2axis part when no taper is used.

v0\_on\_no\_taper Output V0.0 on 2axis part when no taper is used.

return\_to\_thread\_point Output block to return to thread point. Used at the end of a program.

(Arcs)

xcenter Output x center of arc with prefix ("Format/Arc center type"). Prefix define "Prefixes/Arc -x center:".

ycenter Output y center of arc with prefix ("Format/Arc center type"). Prefix define "Prefixes/Arc -y center:".

rcenter Output Radius value of arc with prefix ("Format/Arc center type"). Prefix define -"Prefixes/Radius value:".

arc\_center Output x, and y center of arc with prefixs ("Format/Arc center type"). Prefix define -"Prefixes/Arc x center:" & "Prefixes/Arc x center:".

xcenter\_lf Output x arc center value with prefix for lower shape in 4 Axis entity to entity -programming.

ycenter\_lf Output y arc center value with prefix for lower shape in 4 Axis entity to entity -programming.

xcenter\_uf Output x arc center value with prefix for upper shape in 4 Axis entity to entity -programming.

ycenter\_uf Output y arc center value with prefix for upper shape in 4 Axis entity to entity programming.

iso\_radius Output code setting an Iso radius value with prefix. Code define in "G Codes/Iso radius:".

(Line Numbers)

n Output next sequence number with prefix. Prefix hard coded to (N).

n\_forced Force output of next sequence number with prefix (N). Sequence number for set in -"Format/sequence numbers:".

agie\_100\_n Used to set the first line number prefix to : for agie 100.

seq\_numbers\_start Set the current N sequence number to the sequence number start value.

(Sub Programs)

sub\_call Output subprogram call. Prefix defined in "Prefixes/Arc x center:".

sub\_return Output subprogram return. Prefix defined in "Prefixes/Arc y center:".

sub\_num Output subprogram number without prefix.

sub\_num\_no\_prefix Output subprogram number without prefix.

sub\_num\_with\_prefix Output subprogram number with prefix. Prefix defined in "Prefixes/Subprogram:".

pattern\_contour\_sub\_start Output pattern contour code for subprogram start.

(Comments)

comment\_start Output comment start. Code defined in "Misc parameters/Comment start:". comment\_end Output comment end. Code defined in "Misc parameters/Comment end:". system\_comment Output the automatic comment "FEATURE 1 CNT2X ROUGH CUT -FORWARD"

feature\_name\_comment Output Feature Name comment "2 AXIS -CONTOUR1-RECTANGULAR DIE3"

pass\_name\_comment Output pass name comment "ROUGH 1"

feature\_pass\_names\_comment Output Feature and pass names "2 AXIS -CONTOUR1-RECTANGULAR DIE3 ROUGH1"

sub\_comment Output subprogram description comment.

output\_date Output the date in the form "Tue. 03/05/2002"

output\_time Output the current time in the form "11:35AM"

prog\_n Output program number without prefix (O0001). Hard code prefix ("O",prog\_n) prog\_name Output program name (file name ofsaved program on disk)

machine\_make Output machine manufacturers name as string. machine\_model Output machine model name as string.

pass\_name Output pass name. (Used in comment)

feature\_name Output feature name. (Used in comment)

workpiece\_name Output workpiece name. (Used in comment)

user\_defined\_operation\_pass\_comment Output the user defined comment for the pass defined -in the User Comment tab of the operation dialog.

user\_comment\_1 Output the comment entered in part settings comment 1

user\_comment\_2 Output the comment entered in part settings comment 2

user\_comment\_3 Output the comment entered in part settings comment 3

user\_comment\_4 Output the comment entered in part settings comment 4

user\_comment\_5 Output the comment entered in part settings comment 5

user\_comment\_6 Output the comment entered in part settings comment 6

user\_comment\_7 Output the comment entered in part settings comment 7

user\_comment\_8 Output the comment entered in part settings comment 8

user\_comment\_9 Output the comment entered in part settings comment 9

user\_comment\_10 Output the comment entered in part settings comment 10

user\_comment\_11 Output the comment entered in part settings comment 11

user\_comment\_12 Output the comment entered in part settings comment 12

user\_comment\_13 Output the comment entered in part settings comment13

user\_comment\_14 Output the comment entered in part settings comment 14

user\_comment\_15 Output the comment entered in part settings comment 15

user\_comment\_16 Output the comment entered in part settings comment 16

(G Codes)

feed\_move Set movement to feed and output feed move command (G01). Value defined in "G -Codes/Feed move:".

rapid\_move Set movement to rapid and output rapid move command (G00). Value defined in "G -Codes/Rapid move:".

cc Output code for Cutter compensation. Codes defined in "G Codes".

measurement Output measurement mode (inch/metric). Inch defined in "G Codes/Inch mode:" & -"G Codes/Metric mode:".

g\_taper Output Code for taper cutting on. (At present hard coded to G51,G52 will add -questions).

g\_arc\_move Output G code for arc moves. G02, G03 hard coded.

g\_lower Output G code for lower shape in 4 Axis entity to entity programming (G01, G02, G03). g\_upper Output G code for upper shape in 4 Axis entity to entity programming (G01, G02, G03). four\_axis\_xyuv\_start Output code to start 4 axis xyuv cutting. Code defined in "G Codes/4axis -start".

four\_axis\_xyuv\_end Output code to end 4 axis xyuv cutting. Code defined in "G Codes/4axis -end".

(M Codes)

end\_of\_file Output end of file code (M02). Code define in "M Codes/End of file:".

stop Output stop code (M00). Code define in "M Codes/Stop:".

optional\_stop Output code for Optional Stop (M01). Code define in "M Codes/Optionalstop:". stop\_on\_rough Allow a stop to output if on rough cut and no glue stop.

stop\_tab\_no\_submerged Output stop code if contour is tab cut when not in submerged -machining.

stop\_no\_submerged Output stop code if in submerged machining.

stop\_no\_autothread Output stop code if no autothreading.

stop\_for\_tab\_forced Force the output ofstop code on tab cut.

optional\_stop\_last\_skim Allow a optionalstop to output on last skim pass

stop\_for\_tab Output stop code for tab cut.

optional\_stop\_for\_tab Output optionalstop for tab cut.

stop\_die\_on\_rough\_no\_tab Output Stop code at the end of the rough cut on a Die when no tap -cut is used.

stop\_on\_rough\_no\_coreless Output Stop code at the end of the rough cut except for the rough -cut of a coreless cut.

optional\_stop\_die\_on\_rough\_no\_tab Output Optional Stop code at the end of the rough cut on a -Die when no tap cut is used.

optional\_stop\_on\_rough\_no\_coreless Output Optional Stop code at the end of the rough cut except for the rough cut of a coreless cut.

optional\_stop\_on\_rough Output Optional Stop code at the end of all rough cuts.

stop\_last\_skim Output Stop code at the end of the last skim cut.

optional\_stop\_for\_tab\_forced Output Stop code on tab cut, and force the output even if machine -is stoped.

optional\_stop\_on\_first\_glue\_stop Output Stop code on first glue stop. optional\_stop\_no\_autothread Output Stop code when not auto threading is used. optional\_stop\_no\_submerged Output Stop code when not using submerged machining. stop\_for\_tab\_with\_leadout\_forced Output Stop code on tab cut with leadout forced. optional\_stop\_for\_tab\_with\_leadout\_forced Output Optional Stop code on tab cut with leadout -forced.

stop\_on\_first\_glue\_stop Output Stop code on first glue stop.

stop\_no\_output Set the internalstop code varialbe to Stop, but do not output code. high\_pressure\_pump\_on Output code to turn high pressure pump on. Code define in "M -Codes/High pressure on:".

high\_pressure\_pump\_off Output code to turn high pressure pump off. Code define in "M -Codes/High pressure off:".

cut\_wire Output code to cut wire. Code define in "M Codes/Wire cut:".

thread\_wire Output code to thread wire. Code define in "M Codes/Wire thread:".

(Cutting Parameters)

submerged Output code to fill tank ifsubmerged machining is available and active.

wire\_speed Output code for wire speed if #522 is y. Prefix defined in question 611.

wire\_tension Output code for wire tension if #522 is y. Prefix defined in question 612. generator\_reg\_num Generator register number for Agie.

offset\_reg\_num Offset register number.

flushing\_reg\_num Flushing register number for agie.

angle\_reg\_num Angle register number for agie.

wire\_offset\_force Force the output of the "wire\_offset" variable.

wire\_offset\_taper Force the output of the "offset\_taper" variable.

wire\_offset\_zero Force the output of the "offset\_zero" varaible

ctc\_register Output the code for the current Cutting Conditions Register.

ctc\_value Output the Cutting Coditions value without prefix.

rapid\_feed\_rate Output the feed rate using the rapid feed rate value.

(Cutting Conditions)

cutting\_cond\_first\_cut Output code for cutting condition for entrance cut (power setting). Prefix -define in "Prefixes/Cutting cond:".

cutting\_cond Output code for setting cutting conditions (power setting). Prefix define in -"Prefixes/Cutting cond:".

(Feed Rate)

feed\_rate Output code for feed rate.

start\_hole\_feed\_rate Output code for rapid feed rate to edge ofstart hole.

feed\_rate\_first\_cut Output code for entrance cut feed rate.

feed\_rate\_force Force the output of the "feed\_rate" variable.

(Offset)

out\_offset\_variables Output offsets register variables. (Used only ifset to use variables for offset -"Misc parameters/Taper-offset".

wire\_offset Output code to set wire offset. Codes defined in "G Codes/Offset left:", & "G -Codes/Offset right:".

cancel\_offset Output cancel wire offset in 2Axis. Code defined in "G Codes/Cancel offset:". cancel\_offset\_4axis Output cancel wire offset in 4Axis. Code defined in "G Codes/Cancel 4axis -offset:".

agie\_wire\_offset Output code to set wire offset for agie machines. Prefix defined in -"Prefixes/Wire offset:".

set\_offset\_register Output code calling an offset register to set wire offset.

offset\_register Output code for the current offset register.

offset\_value Output offset amount.

(Taper)

out\_taper\_varaibles Output taper angles as register variables. (Used only ifset to use variables -for taper "Misc parameters/Taper-offset".

cancel\_taper Output code for cancel taper. Code defined in "G Codes/Cancel taper:". taper\_angle Output code to set taper angle. See taper format setting in "Misc -parameters/Taper-offset".

taper\_zero Output taperzero degrees. Used to initialize taper to zero at the beginning of program.

taper\_register Output taper register number when taper is output using registers.

taper\_value Output taper angle. taper\_mode Output taper mode (Left, Right, Off). taper\_angle\_no\_prefix Output taper angle without prefix.

force\_taper\_zero\_on\_taper Force the output of a taper of 0.0, When the set taper value is not -0.0.

(Start Hole (Start Hole Drilling))

drill\_sub\_calls Output drillsubroutine call for making start hole.

drill\_end\_of\_file Output drill end of file for making start holes.

drill\_subprogram Output drillsub program with hole positions.

drill\_program Output drill positions without sub programs.

z\_drill Output Z value for drilled hole.

z\_clearance Output Z clearance for positioning between drilled holes.

(Script File (Agie 123 with Jobs))

agie\_123\_job\_xr Output X rapid block for agie 123 with jobs.

agie\_123\_job\_yr Output Y rapid block for agie 123 with jobs.

iso\_file\_path Output the NC sub folder for the ISO file if user has selected NC files to create sub -folder.

tech\_file\_name Output the Technology file name.

tech\_file\_path Output the Technology file path.

contour\_direction Output the contour chain direction (CCW or CW).

rough\_pass\_direction Output the Rough pass contour direction (CCW or CW). agie\_123\_pass\_direction Output the contour direction (CCW or CW) using logic based on which -pass is being cut.

(Script File (AgieVision))

file\_path File path for all files when using script format.

open\_script\_file Open the script file.

close\_script\_file Close the script file.

open\_iso\_file Open Iso file.

close\_iso\_file Close Iso file.

iso\_file\_name Iso file name.

set\_to\_nc\_file Set all writing functions to the nc file.

set\_to\_iso\_file Set all writing functions to the iso file.

set\_to\_script\_file Set all writing functions to the script file.

set\_to\_sbr\_file Set all writing functions to the sbr file.

iso\_file Iso file name.

script\_file Script file name.

material\_name Material name.

wire\_name Wire name

punch\_die\_open Output feature type (punch, die, open contour) for Agie Vision.

entry\_mode Output leadin/leadout mode for Agie Vision.

exit\_mode Output exit mode for Agie Vision.

stp\_number Start point number.

number\_of\_skims Output number ofskim passes.

tab\_width Output tab width.

reverse\_tabs Output setting for reverse tab cuts.

output\_sub\_calls Output subprogram call line (" camw1");

output\_sub\_def Output subprogram define line ("sub camw1");

output\_sub\_number Output the subprogram number ("1").

zero\_position\_x Work piece zero X value (ID\_POSX).

zero\_position\_y Work piece zero Y value (ID\_POSY).

zero\_position\_z Work piece zero Z value.

return\_plane\_distance Work piece machining return Plane (ID\_VALRETP). security\_plane\_distance Work piece machining security Plane (ID\_VALSECP).

part\_length Work piece length (ID\_DIML).

part\_width Work piece length (ID\_DIMB).

priority\_number Machining order priority number (ID\_PRIORITY).

quality\_name1 Output quality name for Normal cut and land cut for agie vision.

quality\_name2 Output quality name for Taper cut of land and taper for agie vision. work\_condition1 Output work condition for Normal cut and land cut for agie vision. work\_condition2 Output work condition for Taper cut of land and taper for agie vision.

ra\_value1 Output Ra value for Normal cut and land cut for agie vision.

ra\_value2 Output Ra value for Taper cut of land and taper for agie vision.

te\_value1 Output Te value for Normal cut and land cut for agie vision.

te\_value2 Output Te value for Taper cut of land and taper for agie vision.

tkm\_value1 Output Tkm value for Normal cut and land cut for agie vision.

tkm\_value2 Output Tkm value for Taper cut of land and taper for agie vision.

high\_speed1 Output high speed machining for Normal cut and land cut for agie vision. high\_speed2 Output high speed machining for Taper cut of land and taper for agie vision. smooth\_finish1 Output smooth finish setting for Normal cut and land cut for agie vision. smooth\_finish2 Output smooth finish setting for Taper cut of land and taper for agie vision. commutation\_entry\_distance (ID\_COMMPOINTENTRY)

commutation\_exit\_distance (ID\_COMMPOINTEXIT)

four\_axis\_z\_lower Four axis cutting z lower section value (ID\_POSZ).

start\_hole\_diameter Start hole diameter value (ID\_DIAMETER)

set\_collar\_cutting\_land Output the collar setting for land.

set\_collar\_cutting\_taper Output the collar setting for taper.

collar\_position Z value for collar/land (ID\_POSZ).

collar\_taper\_angle Taper value for collar/land & taper (ID\_TAPER).

collar\_taper\_height Output the collar taper height.

collar\_group\_name Output the collar group name.

end\_point\_x End point X (ID\_POSX).

end\_point\_y End point Y (ID\_POSY).

taper\_collar\_type Collar/Land type (on top, on bottom).

die\_clearance Die clearance (ID\_CLEARANCE).

prev\_iso\_file\_name Previous Iso file name.

collar\_type Output collar type for land and taper.

collar\_land\_height Land height.

agie\_work\_name Work piece name for taper in land and taper (LC1,LC2,LC3). agie\_group\_name Group name.

output\_agie\_taper\_z Output the taper Z value.

punch\_die Output the PUN / HOL value for punches and dies.

output\_quality\_one Output that quality one is either quality is user defined or predefined. output\_quality\_two Output that quality two is either quality is user defined or predefined. output\_quality\_one\_coreless Output that quality one for coreless is either quality is user defined -or predefined.

output\_quality\_one\_land\_and\_taper Output that quality one for land and taper is either quality is -user defined or predefined.

output\_quality\_two\_land\_and\_taper Output that quality two for land and taper is either quality is -user defined or predefined.

output\_die\_clearance Output die clearance in Agievision.

output\_agie\_taper Output lines for taper in Agievision.

output\_agie\_leadout Output lines for leadout in Agievision.

(Agi)

cc\_coreless\_agie Output the appropriate offset (G40,G41) of coreless cut depending on if it is the 1st, 2nd, of 3rd entity.

agie\_start\_of\_file Output the agie start of file block if it has not been output yet. last\_move\_direction\_coreless Output the X,Y of the vector of the last movement of the coreless -cut.

last\_move\_direction Output the X,Y of the vector of the last movement of contour cut. first\_move\_direction Output the X,Y of the vector of the first movement of contour cut. first\_move\_split\_arc Output the first move of the contour if it is an arc. Split the arc and output it -as two arc moves.

x\_f\_distance\_from\_end Output the X move of a line moving to a point a distance back from the -actual end point.

y\_f\_distance\_from\_end Output the Y move of a line moving to a point a distance back from the -actual end point.

x\_f\_arc\_distance\_from\_end Output the X move of a arc moving to a point a distance back along -the arc from the actual end point.

y\_f\_arc\_distance\_from\_end Output the Y move of a arc moving to a point a distance back along -the arc from the actual end point.

arc\_center\_distance\_from\_end Output the new arc center when arc cut distance from arc end is -used.

prev\_v\_to\_zero Set the prev V movement value to 0.0.

(Sodick)

sodick\_taper\_height Output taper height as stock height, or land height depending on current -settings, Use in header for TP value.

sodick\_taper\_opposite\_height Output taper opposite height as stock height, or land height -depending on current settings, Use in header for TN value.

memorize\_rethread\_on\_stop Output the code for memorizing the rethread point when the wire breaks.

(Charmille)

g27\_on\_no\_taper Output a G27 code when no taper is used on 2Axis contour.

taper\_zero\_blum Output taper 0.0. Custom variable for Blum.

(Ona)

technology\_file\_name Output the technology file name that was entered on the ONA posting -page.

xcenterup\_minus\_xcenterlow Output X center value for upper section arc of 4 axis part -incremental from X Center of lower section arc.

ycenterup\_minus\_ycenterlow Output Y center value for upper section arc of 4 axis part incremental from Y Center of lower section arc.

(Wire Guides)

metric\_upper\_guide\_pos Output upper wire guide position in metric regardless of inch/metric -mode.

upper\_guide\_pos Output upper wire guide position.

lower\_guide\_pos Output lower wire guide position.

guide\_span Output the distance between upper guide, and lower guide.

(Misc Characters)

cr\_lf Output carriage return line feed characters.

single\_quote Output single quote character.

quote Output double quote character.

n\_spaces Output spaces for the number of characters in the previous sequence numbers four\_axis\_delimeter Output delimeter character between upper and lower. Delimeter value -define in "Misc parameters/4axis contour delimeter:".

null Output a ascii charater 0 or NULL.

(Misc Variables)

on\_error\_jump Output code for on error jump. Code defined in "M Codes/On error:". incr\_upper\_plane Output incremental value from program plane to upper plane.