30-03 *Solution*

Milling Offsets

The following offset chart shows the changes made in the bottom pane. Study the answers for more details.

No.	H-OFFSET		D-OFFSET	
	GEOMETRY	WEAR	GEOMETRY	WEAR
01	-154.370	0.000	6.000	0.055
02	-178.830	-0.028	4.500	0.000
03	-166.725	0.036	0.000	0.000
04	-147.510	0.000	7.500	-0.117

No.	H-OFFSET		D-OFFSET	
	GEOMETRY	WEAR	GEOMETRY	WEAR
01	-154.370	0.140	6.000	-0.005
02	-178.830	-0.128	4.500	0.000
03	-166.689	0.000	12.500	0.000
04	-147.510	0.000	7.500	-0.085

1. An oversize pocket is a scrap, because too much stock has been removed. To ***add*** stock, ***increase*** the wear offset D04 by one half of the measured difference: `-0.117 + 0.064 / 2 = -0.085`.
2. If the depth is too shallow, it means the tool length offset has been set too high. To correct the error, increase the stored tool length wear offset H02 by 0.1, in the negative direction: `-0.028` will be changed to `-0.128`.
3. An undersize pocket can be recut, because there is stock still remaining. To ***remove*** stock, ***decrease*** the wear offset D01 by one half of the measured difference: `0.055 - 0.12 / 2 = -0.005`.
4. Only the H03 offset is affected. The wear offset has to be added to the geometry offset: `0.036 + -166.725 = -166.689`.
5. If the pocket depth needs to be adjusted, it will apply to the H01 offset (wear). The new setting will be `0.140`.
6. The geometry offset D03 (for tool T03) will be the radius of the new tool, which is `12.500` mm.
7. If the stored radius offset D02 is 4.500, the tool diameter will be `9.000` mm.
8. The H02 geometry offset would remain unchanged, the tool radius D02 offset would change from 4.500 to 5.000.
9. All offset settings would remain the same - the change in depth must be made in the program, ***not*** in offsets.
10. If both the ***H*** and the ***D*** offsets share the same registry, the ***D*** offset typically uses a number that is higher by 20, 30, 40, 50, etc., than the length offset. For example, if 50 is the difference, then tool T01 will use H01 and D51 offsets.

    The current setting (after other modifications) has to combine the H01 geometry and H01 wear offsets: `-154.37 + 0.14 = 154.51`, which will be stored in the tool length offset H01. Similar change has to be done for the radius offset: `6.0 + -0.005 = 5.995`, which will be stored in the tool radius offset D51, of the same offset registry screen.