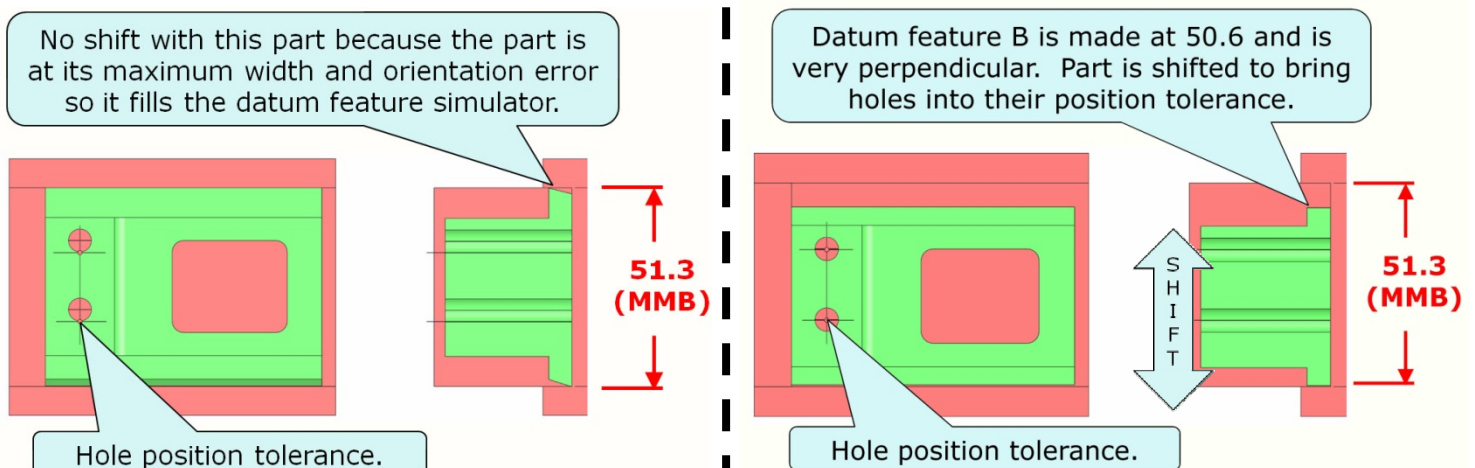
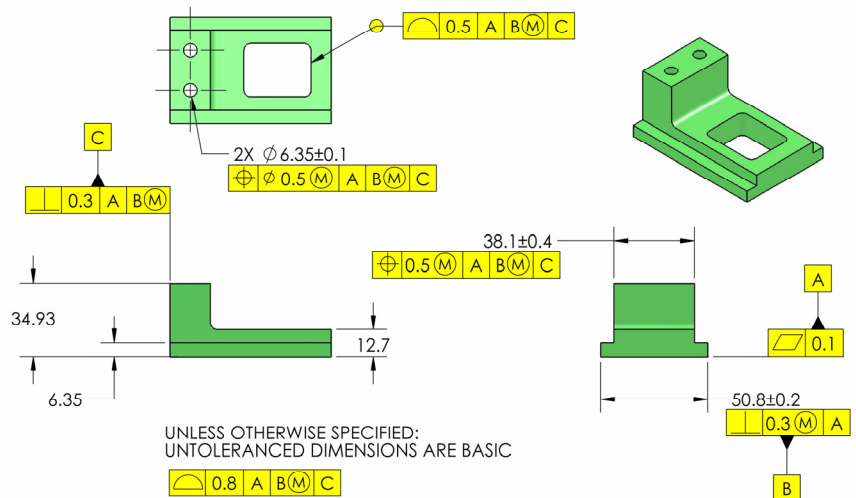


March 2012

Tip-of-the-Month

Part Geometry Affects Datum Shift

Datum displacement, often referred to as datum shift, acts different depending on the geometry of the part. On this part, the shift can only be in one direction. The part must be in full contact with datum feature A and C. However, there is a possible shift between datum feature B and the datum feature simulator because datum feature B is modified at MMB.



Datum feature B of the part on the left was produced at its largest size and with maximum allowable perpendicularity error. It just fills the datum feature simulator and would not be able to shift around in a fixture. The holes illustrated are out of position tolerance.

Datum feature B of the part on the right was produced at its smallest size and very perpendicular. Therefore, it is allowed to shift in the fixture to bring the holes into their position tolerance. Notice the part can only shift in one direction. The position tolerance did not increase due to the allowable shift/displacement of the datum feature.

<http://www.tec-ease.com/premium/gdt-tips-view.php?q=264> to see Don Day explaining this Tip.

Please email us any suggestions or topics that you would like to see covered in our Tip-of-the-Month series.

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